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Environmental Impact Statement
for the
Clearance of Unsafe Buildings
Community Development Block
Grant Program

issued by
the City of Boston
Office of Community Development
October 1975



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DRAFT
Environmental Impact Statement
for the
Clearance of Unsafe Buildings
Community Development Block Grant Program

issued by the
Office of Community Development
City of Boston
Kevin H. White, Mayor

14 October 1975

prepared by
Resource Planning Associates, Inc.
Cambridge, Massachusetts

DRAFT ENVIRONMENTAL IMPACT STATEMENT SUMMARY

Issuing Agency: City of Boston
Office of Community Development

For Information Contact: Martha Goldsmith
Office of Community Development
City Hall, Room 703
Boston, Massachusetts 02201
617-722-4436

Administrative Action:

This action, under the Community Development Block Grant Program, is to demolish 900 abandoned and unsafe residential buildings over two years. Its purpose is to remove a fire, safety and health hazard from the environment. The demolition program is part of a coordinated Neighborhood Improvement Program. It will be implemented in 7 areas of the city: Roxbury, Dorchester, Jamaica Plain, South Boston, Franklin Field, Upham's Corner, and Mattapan.

Adverse and Unavoidable Impacts:

Traffic congestion at demolition sites
Increase in large-particle dust at demolition site
5 dB(A) increase in ambient noise

Major Alternatives Considered:

Rehabilitation
Boarding
No action

Date of Availability: October 14, 1975

Agencies from Which Comments Have Been Requested:

Federal Government

Advisory Council on Historic Preservation
Council on Environmental Quality
Department of Commerce, Economic Development
Administration
Department of Housing and Urban Development
Department of Health, Education and Welfare
Department of Interior
Department of Transportation
Environmental Protection Agency
General Services Administration
National Endowment for the Arts
Office of Economic Opportunity

Commonwealth of Massachusetts

Attorney General Department
Communities and Development Department
Executive Office of Commerce and Development
Executive Office of Environmental Affairs
Executive Office of Transportation and
Construction
Massachusetts Historical Commission
Metropolitan Area Planning Council
Office of State Planning (State Clearinghouse)
Public Health Department

Local Agencies and Organizations

Boston Landmarks Commission
Boston Redevelopment Authority
Building Department
City Council
Corporation Counsel
Fire Department
Health and Hospitals
Housing Inspection Department
Office of Public Facilities
Office of Public Services
Parks and Recreation Department
Police Department
Public Library
Public Works Department
Real Property Department
Traffic and Parking Department

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I. INTRODUCTION AND SUMMARY

This environmental impact statement (EIS) is being prepared and submitted for review by the City of Boston in accordance with Section 104(h) of Title I of the Housing and Community Development Act of 1974 (P.L. 93-383), which authorizes Community Development Block Grant (CDBG) applicants to assume those environmental review and decision making responsibilities that would otherwise belong to the Secretary of the Department of Housing and Urban Development (HUD). According to the HUD guidelines for review of CDBG programs*, the City must certify that it has met its responsibilities for environmental review and assessment under the National Environmental Policy Act of 1969 (NEPA) prior to the commitment of Title I funds to particular projects.

Section 102(2)(c) of NEPA requires that an environmental impact statement be prepared for all major federal actions which affect significantly the quality of the environment. An EIS is intended to ensure that all federal actions-- including federally supported programs implemented at the local level-- protect and enhance the quality of the environment. Properly prepared, an EIS serves two purposes: to assist project managers in making program decisions which affect the environment and to record the environmental effects that were considered, should the project be challenged.

The "major federal action" with which this EIS is concerned is the demolition of up to 900 residential buildings scattered throughout the City of Boston. These residential buildings have been abandoned by their owners and declared by the Building Department under the State Building Code to be unsafe for human habitation and hazardous to neighborhood residents. These buildings will be razed as part of an ongoing two-year demolition program entitled "The Clearance of Unsafe Buildings" program.

These buildings scheduled for demolition under Phase II and III of the CDBG program will be razed by licensed wreckers under contract to the City of Boston's Building Department. The contract will describe specifications for exterminating rodents, capping utilities, razing the structure, removing debris, and grading the vacant land.

This EIS has been prepared in accordance with the "Guidelines for the Preparation of Environmental Impact Statements," issued by the Council on Environmental Quality**, and the HUD "Handbook of Departmental Policies, Responsibilities, and Procedures for Protection and Enhancement of Environmental Quality".*** The organization and contents of this EIS are summarized below.

* Federal Register, Wednesday, July 16, 1975.

** Federal Register, August 1, 1973.

*** Federal Register, July 18, 1973.

Chapter II: Description of the Proposed Action outlines the proposed demolition activity. Discussed are the economic and social forces leading to residential abandonment; hazards associated with abandoned buildings; and the options for dealing with abandonment, including, in particular, demolition. The CBDG demolition program is described in detail and related to other ongoing demolition activities and Community Development Programs in Boston. Finally, the administrative procedure and the process of demolition itself are described.

Chapter III: Description of the Environment describes the impact area; that is, the seven Little City Hall areas in which demolition under the CBDG program would take place. They include Roxbury, Dorchester, Jamaica Plain, South Boston, Franklin Field, Upham's Corner, and Mattapan. Each area profile presents a history of the area, a brief characterization of its affected neighborhoods, its distinguishing social and economic features, and recent public and private investment in the area.

Chapter IV: Probable Impacts on the Physical Environment and Measures to Minimize Harm together with the next chapter, contains the most important material of the report. The chapter is divided into sections that identify the following eight categories of impacts:

- land use
- transportation
- air quality
- solid waste
- noise
- utilities
- water quality
- public health and safety

Each category is discussed in terms of current environmental conditions, short- and long-term effects of the project on the environment, and measures that would be taken to reduce unavoidable adverse effects of the demolition activity. Explicit criteria for assessing the extent and nature of the environmental change are developed; the criteria reflect consideration of qualitative, as well as quantitative, measures of the change.

Chapter V: Probable Impacts of the Proposed Action on the Socio-economic Environment and Measures to Minimize Harm treats four categories of effects on the environment:

- economic impacts
- social impacts
- aesthetic impacts
- historic preservation.

The discussion of these socioeconomic impacts is organized, like the material in the preceding chapter, in terms of current environmental conditions, short- and long-term effects of the project on the environment, and measures that would be taken to reduce unavoidable adverse effects of the demolition activity.

Chapter VI: Impact of the Environment on the Proposed Project examines the ways in which the social, economic, and physical characteristics of the impact area and other environmental factors constrain the project. Because the HUD guidelines were written primarily for construction rather than demolition there are few environmental factors that are relevant to this EIS. However, those that are relevant will be discussed in this chapter.

Chapter VII: Alternatives to the Proposed Action considers responses to the problems presented in the impact area of this study other than the currently planned demolition, and assesses the environmental effects of these alternatives. Possible alternatives discussed here include: taking no action, rehabilitating the abandoned buildings and boarding program.

Chapter VIII: Contract Provisions and Program Modifications to Minimize Harm describes demolition contract provisions and discusses those specific modifications to the CDBG program that the City of Boston would implement to reduce potentially adverse effects of the program and to take advantage of opportunities for incident afforded by demolition. The contract provisions dealt with in this chapter represent revisions of demolition contract specifications currently used by the Building Department. The modification to the CDBG program considered here is the development of the means for coordinating the demolition activity with public agencies and private groups.

- Chapter IX: Summary of Adverse and Unavoidable Impacts
summarizes the inevitable adverse impacts anticipated as a consequence of the demolition program in a table and brief discussion of the adverse effects.
- Chapter X: Irretrievable and Irreversible Commitments of Resources
identifies the resource requirements of the demolition program. Because no construction is involved in this project the commitments required by the proposed CBDG project are minimal.
- Chapter XI: Use of the Environment and Commitment of Resources Versus Long-Term Productivity concludes the report with a comparison of the long-term goals of the demolition program and adverse impacts and resource commitments which it would inevitably entail.

The environmental effects of the project are summarized in the chart that follows. For each type of impact the beneficial, neutral, potentially adverse, and unavoidably adverse effects are described. The measures that the City will take to avoid potentially adverse effects are also included.

SUMMARY ENVIRONMENTAL EFFECTS OF THE PROPOSED DEMOLITION PROJECT

TYPE OF IMPACT	BENEFICIAL	NEUTRAL	POTENTIALLY ADVERSE	MEASURES TO MINIMIZE HARM	ADVERSE AND UNAVOIDABLE
Land Use	Availability of vacated parcels for open space or redevelopment activities Removal of blight	Slight decrease in building density	Creation of large parcels of economically undevelopable land	Buildings demolished based on L.C.H. priorities Active campaign to investigate redevelopment potential for all large parcels before demolition Boarding of abandoned structures in good and fair condition	-
Transportation	-	-	Localized congestion and delay due to demolition vehicle movements	Phasing demolition to minimize congestion and delay on local roads Posting signs to alert motorists of demolition activities	Slight congestion and delay of traffic at demolition site
Air Quality	-	-	Fugitive dust resulting from demolition activities Hazardous material (asbestos) released into atmosphere Emissions from heavy-duty demolition vehicle	Extensive dust control by continuous hosing throughout all demolition procedures All buildings to be demolished to be examined for presence of asbestos If present, demolition to be monitored by a city inspector and controls adhered to Phasing of demolition schedule time and locations	20 percent increase in fugitive dust; particles not of respirable size but will cause soiling
Public Health and Safety	Extermination of rat harborages	-	Rat migration if improper extermination	Rat extermination of all buildings to be demolished by licensed exterminator	-
Public Health and Safety	Removal of safety hazards	Increased accident potential to workmen and bystanders	Strict enforcement of the State Building Code regarding public safety during demolition.	-	-

SUMMARY ENVIRONMENTAL EFFECTS OF THE PROPOSED DEMOLITION PROJECT - Continued

TYPE OF IMPACT	BENEFICIAL	NEUTRAL	POTENTIALLY ADVERSE	MEASURES TO MINIMIZE HARM	ADVERSE AND UNAVOIDABLE
Economic	— man-years of employment in demolition operations and extermination	-	-	-	Increased cost of demolition over current, due to cost of waste disposal, safety precautions and rat control
Social	Reduces fire, crime and accident potential In some neighborhoods: restore neighborhood confidence, halt attrition of population and housing, encourage	-	Extensive demolition alters neighborhood character	Buildings demolished according to LCH and neighborhood priorities Public education regarding demolition and vacant lots programs Efficient boarding of abandoned structures in good and fair condition	-
Aesthetics	Improved visual quality of neighborhood	Creation of additional open space	Unightly weeds and debris accumulating on site	-	-
Historic Sites	Restoration of value through creation of open space around property	-	Isolation of historic property from its historic context Creation of visual eyesore in vicinity of historic property Temporary introduction of noise and dust to historic property from nearby demolition	Consultation by LCH manager with neighborhood-level historic preservation groups prior to prioritizing demolitions Adherence to Section 106 of the National Historic Preservation Act	-
Solid Waste	-	-	Disposal of demolition debris in unapproved landfill sites or unapproved incinerator	Affidavit from contractor to assure disposal of demolition waste in approved sanitary landfill or incinerator Recycling of used brick, salvagable wood, and other demolition materials	-

SUMMARY ENVIRONMENTAL EFFECTS OF THE PROPOSED DEMOLITION PROJECT - Continued

TYPE OF IMPACT	BENEFICIAL	NEUTRAL	POTENTIALLY ADVERSE	MEASURES TO MINIMIZE HARM	ADVERSE AND UNAVOIDABLE
Noise	-	-	Noise generated from demolition activities	<p>Modifications to demolition contract specifications requiring:</p> <ul style="list-style-type: none"> notification be given to abutters and neighbors indicating scheduled time and location of demolition compliance with OSHA noise exposure standards compliance with Boston noise regulations 	5 dba increase in ambient noise level adjacent to site during demolition
Utilities	-	Disconnection and removal or sealing of utilities	<p>Decrease of hydrant pressure due to dust control hosing measures</p> <p>Site runoff causing blockage of storm sewer system</p>	<p>Checklist specifying utility shut-off procedures, responsibilities, and requirements</p> <p>Check for storm sewer system blockage by demolition contractors</p>	-
Water Quality	-	No measurable change in harbor water quality	-	-	-

II. DESCRIPTION OF THE PROPOSED ACTION

Abandoned residential and commercial buildings are an increasing problem in urban areas of the United States, as well as a symbol of the crises which many large cities face: declining populations in the core, shrinking tax bases, increasing segregation of the urban poor, flight of capital to the suburbs. New York City, Chicago, Cleveland, St. Louis, and Boston, among others, are experiencing these effects from three decades of urban change, which have left them with an aging housing stock, a large percentage of families who cannot afford to own their own homes, and increased competition for scarce private and public funds. Each of these factors affects the rate and extensiveness of abandonment.

RESIDENTIAL ABANDONMENT IN BOSTON

The phenomenon of housing abandonment has been thoroughly studied and documented in the social science and urban planning literature, and a clear pattern of events discerned. This background section identifies the process by which abandonment occurs, the extent of abandonment in Boston, and efforts which are being made to deal with it. Demolition is one of these efforts, usually chosen as a last resort to eliminate a building that is a hazard to the community.

Economic and Social Forces Leading to Abandonment

A neighborhood moves through six stages before experiencing extensive abandonment:

- Decline of the neighborhood's status.
- Change in the racial or ethnic composition of new residents.
- Property speculation and exploitation.
- Weakened market conditions.
- Disinvestment: flight of capital from the area.
- Abandonment.

The Boston experience is described below in the order of these six phases.

Decline of the Neighborhood's Status

Typically, the process of abandonment begins with a decline in the importance of a neighborhood to the city, as upwardly mobile, relatively affluent families leave for new neighborhoods further away from the urban core. In Boston, as elsewhere, the growth of the suburbs was accompanied by large-scale emigration from the city. Although the Boston Standard Metropolitan Statistical Area population grew by 8.6 percent from 1960 to 1970, the population of the city itself declined by 8.1 percent.

Left behind were a number of old residential neighborhoods, many of which were originally settled in the seventeenth century and subsequently populated up a series of immigrant groups. Each of these groups moved into a neighborhood for a number of decades, then as they advanced economically and socially, moved out, to be followed by a new immigrant group.

Racial or Ethnic Change

The 1940's and 1950's saw a massive migration of poor Southern black families to Northern industrial cities, including Boston where they found housing in the poorer neighborhoods recently inhabited by Italian, Irish or Jewish families. Between 1960 and 1970 in Boston the percentage of white population had dropped by 16.5 percent. Today, the blacks comprise nearly 16 percent of the city's total population.

The newcomers inherited a housing stock that had been built prior to 1930 and largely at the turn of the century. In some sections of Boston, the housing, which had been constructed to accommodate large numbers of European immigrants, was inferior from the moment it was built; for example, many six-family triple-deckers were built with neither closets nor bathrooms.

The lack of new housing to replace the aging and deteriorating stock increased further the demands on existing stock made by this newest wave of immigrants. Many houses were modified to create extra dwelling-units, and overcrowding resulted in even further deterioration. Often property owners were able to increase rental income, while making only minimal improvements to the dwellings.

Restrictions on the settlement of minority families, and particularly blacks, in suburban areas and the poverty of these families served to intensify their segregation inside the urban core. Lacking political and economic power, blacks and other poor groups were not able to follow earlier immigrants out of the central city.

Their isolation was accompanied by growing crime. Large numbers of young, unemployed persons, together with even larger numbers of unstable families, and high unemployment contributed to the rise in crime. White families saw increasing crime rates as proof that the influx of blacks would lead to a decrease in property value, and the influence of this phenomenon on property value is a critical aspect of housing abandonment today.

Property Speculation and Exploitation

The fears related to the change in neighborhood racial composition led to "blockbusting," in which real estate speculators bought up properties at prices below market value and then resold them at inflated prices to blacks. Speculators who dealt in large amounts of land were often able to provide financing when banks would not. To many purchasers, home-ownership was a way to escape from the ghetto, and thus they were willing to pay the inflated price.

Speculation on a large scale became a central issue during the lifetime of a program known as BBURG, or the Boston Banks Urban Renewal Group. BBURG, organized in 1962, was an association of 20 banks formed to service FHA loans for construction and rehabilitation in the Washington Park urban renewal area of Roxbury. In 1965, Washington Park was the home of 25,000 blacks and Boston's largest black community.

Between 1962 and 1965, BBURG provided \$1.6 million for renovation and construction in the renewal area. After a riot in the area in 1968, the city encouraged participating banks to expand the program, and \$20 million was made available for mortgages underwritten by FHA. These mortgages, which were granted for up to 98 percent of the value of a home, made downpayments very low.

The program greatly increased demand for housing, and the BBURG area was expanded to include parts of the South End, Roxbury, North Dorchester and, eventually, Wellington Hill-- an area inhabited at the time by predominantly Jewish homeowners whose mortgages were fully paid. Numerous privately-financed sales to individuals in the same areas also occurred concurrent with the program.

The desire of black families to own homes led to sloppy and unethical practices in the real estate market on a large scale. Black purchasers, 85 percent of whom had never before owned property, were inexperienced and insufficiently counseled. FHA protection of banks from any losses led to their "rubber stamping" mortgage applications. As a result, many of the new and financially inexperienced homeowners, unable to support the costs of their housing, defaulted on their mortgages. Foreclosures and abandonment followed, and the properties reverted to FHA, or to the City when taxes were unpaid.

Efforts to develop counseling, mortgage review, and anti-blockbusting programs came too late to halt foreclosures. A Congressional hearing in 1972 generated sufficient controversy to bring an end to the BBURG program. For at least a year afterward no bank would grant mortgage money or rehabilitation loans inside the BBURG area. But while BBURG operated, some 600 mortgages were let, and by the time the program ended a total of \$31 million had been spent.

Weakened Market Conditions

With mortgage and rehabilitation funds no longer available, the situation continued to deteriorate. Many property owners were unable to pay their taxes, maintain their homes, or make needed repairs. Lack of financing for needed renovations and repairs caused the housing stock to deteriorate beyond the stage at which repairs were economical. Financially stable individuals who had any choice sought residence elsewhere.

While problems of this nature can occur in any poor residential neighborhood, in the neighborhoods under discussion, the bankers' decision not to invest more funds was the major precipitating factor. Homeowners could not resell their property for lack of mortgage money, and owners of older homes needing substantial repair were unable to get funds.

Disinvestment

Property owners "disinvested" when they stopped paying taxes and making needed repairs on their property. Owners collected rents as long as their property was inhabitable, then abandoned it. Banks and other external lending institutions also disinvested when they found other, more attractive investments.

Commercial disinvestment followed, closing many stores. In the Wellington Hill area of Mattapan, the Walk Hill commercial district began to decline. In Roxbury, the major shopping center around Dudley Street no longer attracted quality stores. Mission Hill's major commercial center deteriorated.

Abandonment

When mortgage money could no longer be obtained, sufficient rent collected to cover costs, or financing obtained for renovation, owners were forced to abandon their residential and commercial buildings.

Once abandoned, a building quickly deteriorates. It is stripped by vandals of valuable copper pipes and other fixtures; and the vagrants who move in light open fires in it for warmth. It becomes the scene of drug dealing and other illegal activities. Unless protected in some way, an abandoned building can become a shell in a matter of days, unsafe for habitation and a hazard and eyesore to the community.

The close association of an abandoned building with the hazards of fire and accidents is its most serious safety threat to community residents. Once started, a fire in a dilapidated building burns quickly out of control, threatening adjacent buildings. And once burned or vandalized, a building's

poor physical condition makes it a safety hazard. Children, attracted by the forbidden structure, explore the premises and are hurt.

The Extent of Property Abandonment in Boston

The exact number of abandoned buildings in Boston is unknown. In January 1975, the City Building Department conducted a windshield survey and identified almost 1,500 residential buildings in Boston that appear to have been abandoned by their owners. Since that time, the City and private property owners have demolished about 500 buildings, but a large number of additional buildings have been abandoned.

Of these abandoned buildings 1,145 are located in the seven areas targeted by the spot demolition program (see Table 1). Nearly 40 percent of these buildings are in the Little City Hall area of Roxbury, which is the largest in the City and contains some of the worst housing conditions in Boston. About the same number of abandoned buildings are to be found in adjacent neighborhoods of Dorchester, Jamaica Plain, and Franklin Field. South Boston, Mattapan, and Upham's Corner combined contain fewer than 20 percent of the abandoned housing surveyed.

As Table 1 also shows, more than half of the abandoned buildings have been classified in poor condition and less than 15 percent in good condition. The largest percentage of the latter were found in Jamaica Plain, probably because abandonment is a relatively new phenomenon there. Although South Boston has relatively few abandoned buildings, it has the largest percentage in poor condition. Franklin Field, too, has a serious deteriorated stock of abandoned buildings.

About two-thirds of these abandoned buildings are constructed of wood, many of which are three deckers and rather poorly constructed; one-third are of brick, nearly all of which are located in Roxbury.

Approaches to the Problem of Abandonment

The problem of abandonment can be approached in a number of ways, some of which attack the causes, others only the result-- the abandoned building itself. Approaches that treat the causes of abandonment have the greatest potential for success, but they are also complicated, time consuming, and expensive to implement.

As described in the previous section, final abandonment is related directly to the social and economic forces that culminate in unstable, deteriorating neighborhoods. Thus, all of the programs designed to encourage and maintain a stable residential population in the city help to stem the tide of abandonment. Model Cities, urban renewal, urban home-steading, home improvement grants, infill housing and restoration of historic districts all contribute-- to the extent that they are

Table 1

DISTRIBUTION OF ABANDONED BUILDINGS BY LITTLE CITY HALL AREA, BY CONDITION AND TYPE

LITTLE CITY HALL AREA	NUMBER ABANDONED	PERCENT OF TOTAL ABANDONED	CONDITION			TYPE				
			GOOD	FAIR	POOR	WOOD	BRICK	MASONRY	ASBESTOS	UNKNOWN
ROXBURY	454	39.7	72	199	183	207	219	8	5	15
DORCHESTER	179	15.6	17	68	94	98	36	4	4	37
JAMAICA PLAIN	145	12.7	30	37	78	58	22	7	1	57
SOUTH BOSTON	63	5.5	6	5	52	58	4	0	0	1
FRANKLIN FIELD	139	12.1	11	27	101	100	6	4	8	21
UPHAM'S CORNER	58	5.1	4	16	38	44	7	1	0	6
MATTAPAN	107	9.3	15	35	57	59	15	4	1	28
TOTAL	1145	100%	155	387	603	624	309	281	19	165

Source: Windshield Survey, January, 1975, updated by Little City Hall priorities for demolition established late Spring, 1975.

Table 2

DISTRIBUTION OF BUILDINGS TO BE DEMOLISHED UNDER THE 1975-1977
CDBG SPOT DEMOLITION PROGRAM BY LITTLE CITY HALL AREA

LITTLE CITY HALL AREA	NUMBER OF DEMOLITIONS				TOTAL PROGRAM
	1975-76 PHASE I*	1975-76 PHASE II	1976-77 PHASE III	TOTAL FOR THIS EIS	
ROXBURY	-	220	220	440	440
DORCHESTER	100	-	80	80	180
JAMAICA PLAIN	-	60	80	140	140
SOUTH BOSTON	-	40	20	60	60
FRANKLIN FIELD	100	-	50	50	150
UPHAM'S CORNER	-	40	20	60	60
MATTAPAN	-	40	30	70	70
TOTAL	200	400	500	900	1100

Source: Office of Community Development.

* A review of the demolition of these buildings for environmental effects determined that no EIS was needed; March 26, 1975.

intrinsically effective. However, as they have only been partially successful, the problem of abandonment continues to grow.

Once a building has been abandoned, the City can take one of two courses of action to protect it and the community: rapid and effective boarding or demolition. The City of Boston has a program that attempts to board up all buildings ascertained to be abandoned; it also seeks out property owners to request that they board their own buildings. However, often a building is seriously vandalized and burned before it can be boarded, and private efforts at boarding often are shoddy, offering little protection against scavengers and vandals.

In the City of Boston, where housing shortages are significant, every effort must be made to preserve the existing housing stock. But when boarding fails to prevent a building from deteriorating beyond repair, or to a point where it is a community hazard, demolition is the only alternative.

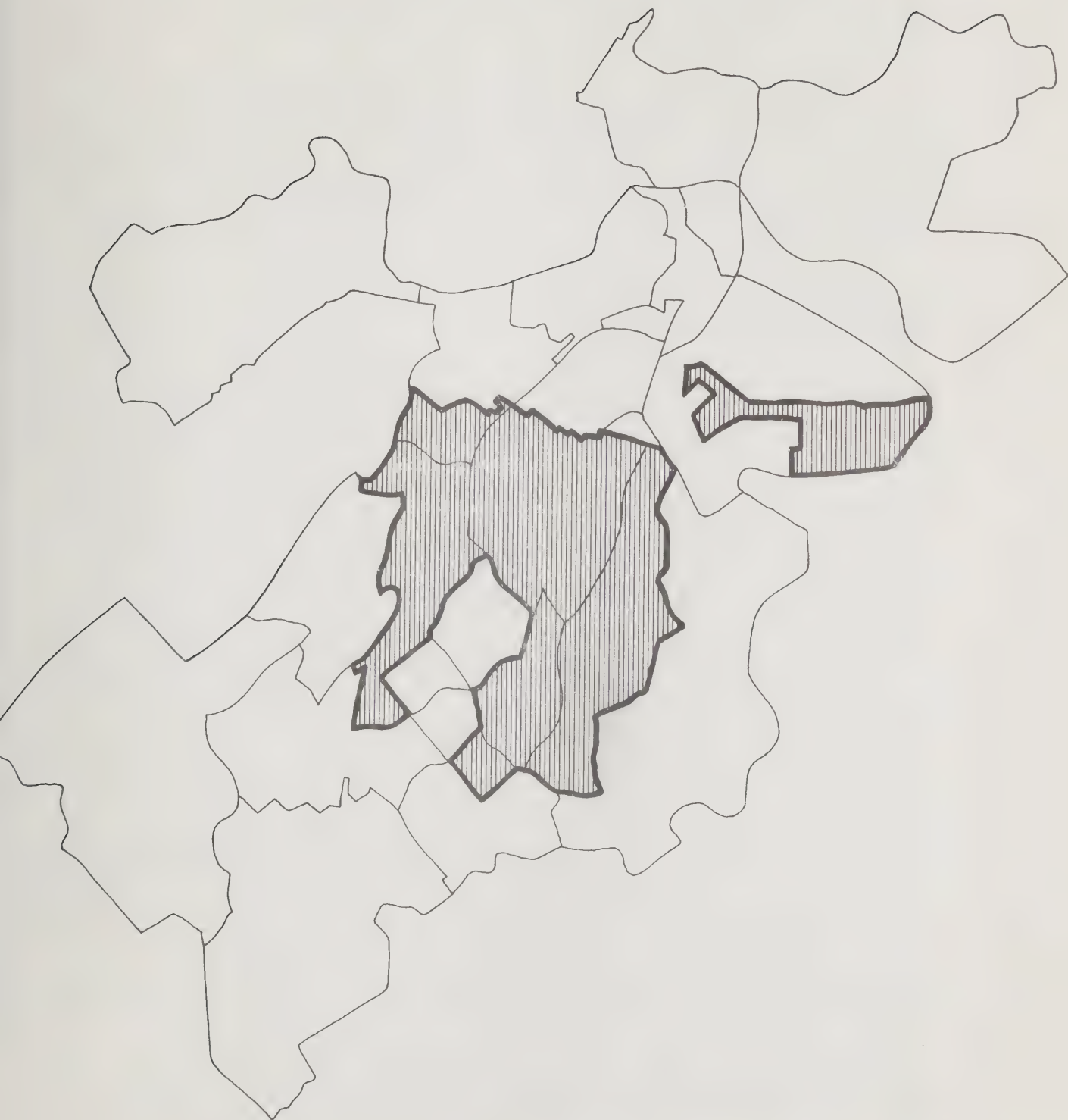
DESCRIPTION OF THE CDBG CLEARANCE OF UNSAFE BUILDINGS PROGRAM

The Clearance of Unsafe Buildings Program is funded under a Community Development Block Grant to the City of Boston. It operates out of the Mayor's Office of Community Development. It is implemented in close communication with the Little City Halls (LCH) in each Boston neighborhood. The program is described below and related to other demolition activities and other neighborhood programs in the City of Boston.

Number, Location, and Type of Buildings to be Demolished

The Clearance of Unsafe Buildings Program is an intensive two-year effort to demolish approximately 1100 residential buildings in the City of Boston which have deteriorated beyond repair and become hazards to the community. These buildings are equivalent to approximately 2750 dwelling units, with an average of 2.5 units per building. Under Phase I of the program, which is already underway, 200 buildings (500 dwelling units) are being razed in the Codman Square and Mount Bowdoin neighborhoods of Dorchester and in Franklin Field. The demolition of these buildings was reviewed on March 26, 1975 for environmental effects and found not to require a complete EIS. Under Phases II and III of the program, 900 additional buildings are scheduled to be demolished: 400 during fiscal year 1975-76, and 500 during fiscal year 1976-77. The focus of this EIS is on the environmental effects of demolition for Phases II and III.

The CDBG demolition program impact area is shown on Figure 1. Shown on Table 2 are the locations of the 900 buildings scheduled for demolition, half of which are located in Roxbury; 30 percent of the remaining 400-odd houses are located in Jamaica Plain; the rest are spread throughout sections of Dorchester, South Boston, Franklin Field, Upham's Corner and Mattapan.



C.D.B.G. Demolition Program

Impact Area
City of Boston

About 60 percent of the CDRS buildings are wood frame and clapboard; an additional 2 percent are wood frame with asbestos shingles; 35 percent are brick; and the remaining 3 percent are concrete or masonry, such as stucco (Table 3).

The windshield survey conducted in January of 1975 by the City's Building Department and updated that spring by the Little City Hall managers determined the total number of buildings to be demolished under this program, their distribution by Little City Hall area, and their housing type. Although the specific list is outdated, the pattern of abandonment and deterioration indicated by the survey is thought to be accurate.

Relation of the CDBG Demolition Program to Other Demolition in the City of Boston

The CDBG Unsafe Buildings Clearance Program almost doubles the previous rate of residential demolition in Boston. As shown in Table 4, residential demolition has occurred over the last 20 years at an average annual rate of 500 buildings per year. The program peaked with the demolition of 905 structures in 1964 during the height of urban renewal. In 1972, the number of demolitions fell to 280 buildings. However, during the 18 months from January 1974 to June 1975, there were 1046 demolitions by the City or private property owners -- an average of 58 per month or 696 per year. Demolitions undertaken or permitted by the Building Department apart from CDRS are expected to continue at this rate. Thus, the CDBG program, with an average of 550 demolitions per year, would represent an 80 percent increase in one year over 1975-76 demolitions-- a 110 percent increase over the previous 20 year average.

Administrative Steps Prior to Demolition

A building is first identified for demolition by the local Little City Hall manager. After being inspected either by the Building Department's Deputy Building Commissioner or another inspector, a decision is made either to demolish or board the building. In an extreme emergency, a building will be condemned and torn down immediately; however, under normal conditions, a title search is conducted and an unsafe building violation notice issued to the owner. If the owner can be found, the case is brought to court. The court then decides whether the building is to be repaired or demolished, and who is to pay for the demolition. If the owner cannot be found, or cannot afford to repair the building, the building is condemned and boarded or scheduled for demolition.

If the building is to be demolished, photographs are taken and the owner notified. Any tenants in the building are evicted. As soon as 10 to 15 such buildings are identified in one area, demolition bids are

Table 3

DISTRIBUTION OF BUILDINGS TO BE DEMOLISHED, BY TYPE

TYPE	TOTAL	PROGRAM YEAR			PERCENT OF EACH TYPE, PHASES II AND III
		1975-1976 PHASE I	1975-1976 PHASE II	1976-1977 PHASE III	
WOOD	700	154	228	318	60
BRICK	347	36	153	158	35
MASONRY	32	4	13	15	3
ASBESTOS	21	6	6	9	2
TOTAL	1100	200	400	500	100%

Source: Estimates by Resource Planning Associates, based on Windshield Survey, January 1975.

Table 4
RESIDENTIAL TAKEDOWNS IN BOSTON
1955-1974

<u>Year</u>	<u>Number of Residential Buildings Demolished</u>
1955	215
1956	430
1957	565
1958	695
1959	625
1960	435
1961	455
1962	280
1963	650
1964	905
1965	655
1966	610
1967	440
1968	620
1969	415
1970	510
1971	280
1972	495
<u>1973-1974</u>	
Annual average: 500	

Source: Building Department data compiled by Massachusetts Institute of Technology under a grant from the National Science Foundation.

solicited by public notice. The bids are received and a contract awarded to the lowest bidder after being approved by the Mayor and Finance Commission.

After the building is demolished, the owner is billed for the cost, plus one-half the cost of any necessary repairs to an adjoining party wall. If the bill is not paid within 90 days, as is the case for about 90 percent of the demolitions, a lien on the property is filed with the Registry of Deeds.

Description of the Wrecking Process

Because methods vary from one wrecker to another and one structure to another, the wrecking process is difficult to describe in general terms. The type of construction, condition of the structure, proximity of neighboring buildings, price of scrap, and the time available all influence the process.

Prior to demolition rats are exterminated, if necessary, and all of the utilities shut off and capped. When actual wrecking begins, most buildings come down in the reverse order from which they went up; that is, from top to bottom and from inside out. Just prior to demolition, the wrecking team removes anything salvageable from the building, such as plumbing and heating equipment or doors. For safety reasons, glass is removed as well.

At this point, the procedure varies widely. The following describes, in brief, the activities involved in razing a three-family, wood frame structure of the type common to most of the buildings to be demolished under the CDBG program. First, a crane with a clamshell bucket takes down the building. Next, a bulldozer grinds and compresses the debris, which is loaded onto trucks for transport to a disposal site. Ground and fill covering are delivered to the demolition site, where a bulldozer rough grades the material. The whole process can take from 2 days to a week, depending on the size of the building and the schedule of the contractor.

Use of the Lots After Demolition

Through the CDBG REVIVAL or vacant lots program, money has been made available for improving city-owned vacant lots for use as gardens, yards, or off-street parking. Owners of abutting property may purchase these lots for an average of \$200; tenants and established community groups may use the land under a long-term lease or use permit available from the City's Office of Community Development.

The REVIVAL program is funded at a level of \$472,000 for fiscal 1975-76, with a similar amount planned for 1976-77. This is enough money to improve about 674 city-owned lots per year at an average cost

of \$700 per lot. Unfortunately, the program does not provide funds for improving privately-held lots.

REVIVAL also includes the expansion of the City's ongoing Victory Gardens program. Qualified groups may apply to develop a new Victory Garden site, on which the City will make basic improvements and supply water.

RELATION OF THE DEMOLITION PROGRAM TO OTHER PROGRAMS IN THE AREA

The Clearance of Unsafe Buildings Program is one part of Boston's Neighborhood Improvement Program, which is a coordinated effort to maintain and restore citizen confidence in and private investment to Boston residential neighborhoods. The Neighborhood Improvement Program subsidized by Federal CDBG funds includes all of the community development activities outlined below. More information about the specific projects in each neighborhood can be found in Chapter III: Description of the Environment.

Housing

In addition to the demolition of abandoned buildings, housing-related programs include the following:

- The Housing Improvement Program, which provides assistance and creates incentives for homeowners to rehabilitate residential housing. Incentives include eligibility for a rebate equal to 20 percent of the value of repairs, shelters from property tax reassessment, and comprehensive technical advice on consumer protection, home burglary protection, and energy conservation.
- The "Urban Homesteading" Program, which provides opportunities for an individual to "homestead" a house for the cost of rehabilitation. Inducements include a low interest construction loan, a tax rebate, and guaranteed financing. In return, the "homesteader" is required to make a cash downpayment of 20 percent of the rehabilitation costs up to \$2,000.00, bring the house up to building code standards, maintain residence for 3 years, and meet the normal financial obligations of home ownership.
- The Boarding Program, which is designed to secure buildings that can be rehabilitated at reasonable cost. The program, an expanded version of the successful Model Cities boarding program, allows for property to be secured immediately to prevent vandalism. A total of \$300,000 has been budgeted for this program.
- Revitalization of Vacant Lots (REVIVAL), which in conjunction with the demolition of abandoned buildings effort, encourages the restoration of the City's vacant land.

Neighborhood Business Districts

- The Neighborhood Business Districts Program represents a commitment by the City to preserve and improve the local shopping areas in Boston's neighborhoods through public improvements and incentives for private investment. Specific program areas include parking, street lighting, and street improvements; technical counseling and assistance; and storefront rehabilitation.

Capital Improvements

- The Capital Improvements Program is designed to meet the needs of the City's residents for neighborhood recreation buildings, parks, streets, residential and commercial lighting, and water and sewer lines; through long-term investments in new buildings, major repairs, and renovations.

Urban Renewal

- Boston's Urban Renewal projects, most of which involve capital improvements, would require many millions of dollars to complete. In 1975, the City will commit \$6 million of the CDBG entitlement to the completion of urban renewal. Funds are to be allocated to the activities having the highest priority and most binding commitments in each project area.

Neighborhood Services

- The Neighborhood Services Program includes recreation programs, health services, services for the elderly, and drug education programs.

III. DESCRIPTION OF THE ENVIRONMENT

The impact area of the CDRS Demolition Spot Program includes seven Little City Hall areas in Boston:

- Roxbury
- Dorchester
- Jamaica Plain and Mission Hill
- South Boston
- Franklin Field
- Upham's Corner
- Mattapan

Together, these areas comprise the impact area for the Unsafe Building Clearance Program. Each area is described by location and neighborhood and accompanied by a map. Then, a very brief history of the area is presented with a view to tracing the background and development of present-day characteristics of the community.

The next section of each profile deals with features of the impact area that are specifically related to the demolition project. First, thumbnail sketches of Little City Hall area neighborhoods which are targets for the program present socio-economic data of the communities concerned and describe the usual housing stock to be found in these neighborhoods. Following the description of Little City Hall area by neighborhood, there is a section which defines and summarizes distinguishing social, economic, and housing-stock characteristics of the area as a whole. A final section of each profile describes recent public and private investment in the area.

ROXBURY - LITTLE CITY HALL AREA PROFILE

The Roxbury Little City Hall area is located below the South End and above Franklin Park; Dorchester and Jamaica Plain lie to the east and west, respectively. The Roxbury District Planner has identified five subdivisions of the Little City Hall area: neighborhoods A, B, C, D, and Washington Park (see Figure 2). These geographic units of Roxbury are distinguished by different ethnic, income, residential, and racial characteristics. About 56,700 people lived in this area in 1970.

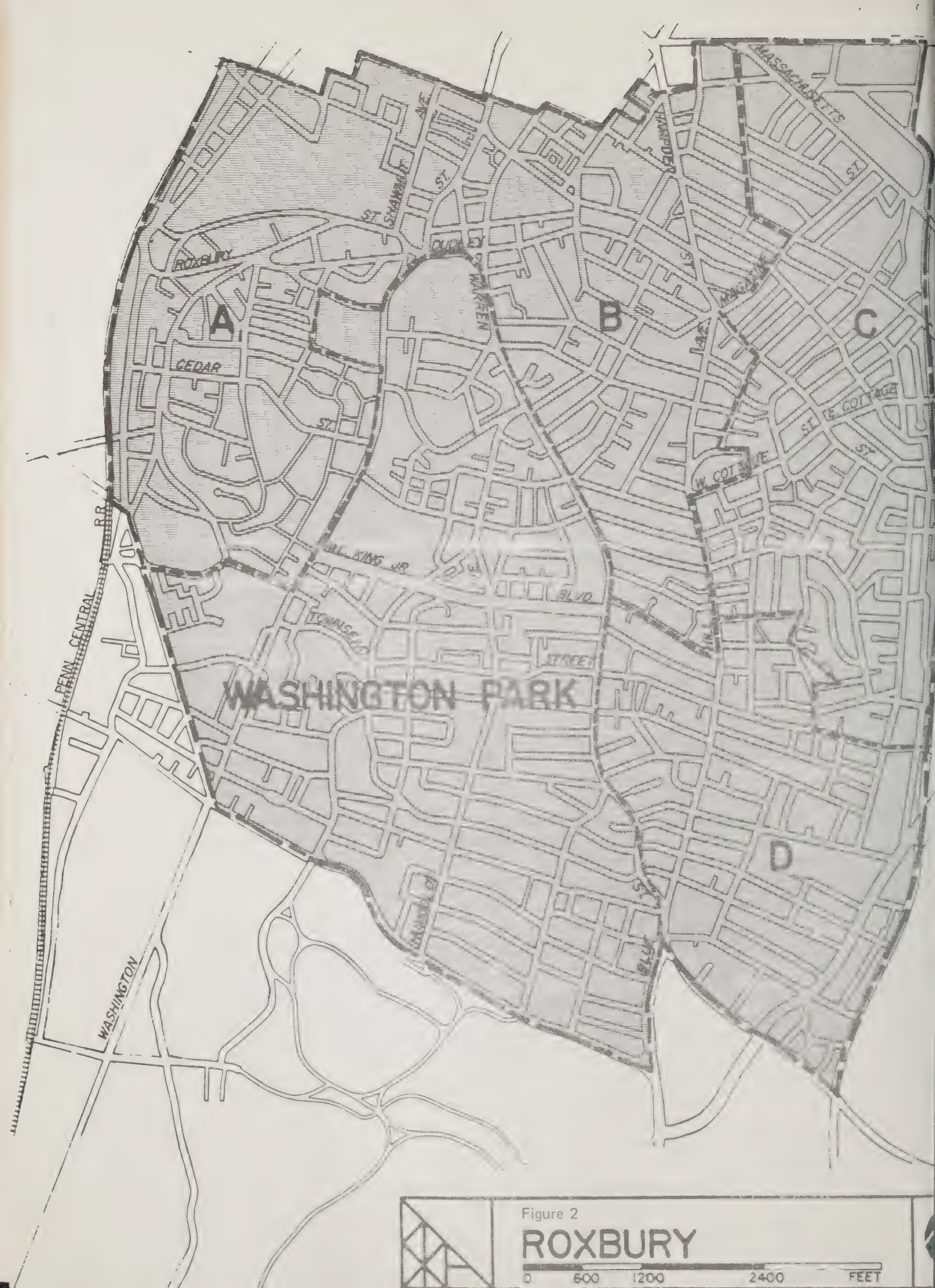


Figure 2

ROXBURY

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History of the Area

The Village of Roxbury was founded in 1630 as part of the early Massachusetts Bay Colony. The hilly farmland lying just south of the principal Boston settlement that was barely connected by a narrow strip of land is now a densely populated community of urban residents settled on 83 square miles. Over the past three centuries, much of the area was created from landfill. In the last 150 years, Roxbury was the home first of Irish immigrants, then of European Jews, and, after World War II, of black families moving north. The newest ethnic groups to settle in Roxbury are Puerto Rican immigrants and other Spanish-speaking people.

Most housing constructed in the district was built before 1920. By 1950, housing deterioration was evident throughout Roxbury. The Upper Roxbury neighborhood sections remained in better condition, partly because the area had long been identified as having exceptionally fine houses. In the mid-1960's, the Washington Park area along with Roxbury became the first residential rehabilitation project undertaken by BRA.

Area Characteristics by Neighborhood

All five subdivisions of the area, i.e., Neighborhoods A, B, C, D, and Washington Park, will be discussed below. Spot demolition projects are planned for virtually every neighborhood, since standard houses are common in the area.

Neighborhood A

This neighborhood, also known as Highland Park, is bounded by Washington, Richie, and Ruggles Streets, and by the Penn Central Railroad - Midland Division. According to 1970 census data, this neighborhood had the lowest population in Roxbury, only 6,480. At that time, 25 percent of the population was white and represented either individuals attracted by the interesting old houses or families who had resided in the neighborhood for years. In general, the neighborhood is poor, although not the poorest in the district. One-third of the people living here had an annual income below \$3,000 in 1970.

This neighborhood is one of the oldest settled in Roxbury and has a large number of single-family houses, many of which are examples of outstanding architectural design or sites of historic importance. In fact, four properties in this neighborhood are listed in the National Register of Historic Places. For most of the residents here, however, the housing stock is inadequate. Almost one-third of the housing needs major repair. Vacancy rates in this neighborhood,

are the highest in Roxbury; almost one-third of buildings may be vacant at a given time. There are very few apartment buildings in this neighborhood and only a few three- and four-family structures.

Neighborhood B

Neighborhood B, just east of A, is bounded by Warren Street on the west and, roughly, by Blue Hill Avenue to the east. According to 1970 census data, it included a community with nearly 10,000 residents at that time. On the average, its residents have tended to be older than those of Roxbury as a whole. With respect to income level, the neighborhood is divided, according to 1970 statistics, into a relatively affluent section of middle-income black families who live mainly between Moreland and Maywood Streets and a group of poorer black and Spanish-speaking families who live north of Moreland Street. The presence of the poorer families, especially those in the Orchard Park Housing Project, which includes about 25 percent of the Neighborhood B population, made the average income here lower than that of Roxbury residents in general. Fifty percent of the population in 1970 lived on incomes below \$3,000 per year; and four-fifths of the population, on less than \$6,000.

The middle-income families in Neighborhood B have a relatively high rate of home ownership, and the housing is in better condition than that in the rest of Roxbury. The neighborhood has more large buildings (that is, buildings with five or more units) than Roxbury as a whole. The overall housing and especially on middle-income residential streets, is in somewhat better condition than in the other neighborhoods of Roxbury.

Neighborhood C

This neighborhood is located roughly between Blue Hill Avenue and Warren on the west and the Quincy MBTA Line on the east. Massachusetts Avenue cuts through its northeast section, while Quincy Street forms its southern boundary. As of 1970, slightly fewer people lived here than in Neighborhood B. The 1970 census data show that Neighborhood C, with 40 percent white residents, had the highest proportionately white community in Roxbury. Neighborhood C also included a 10-percent Spanish-speaking population, which is a comparatively high proportion when compared with the total Boston rate of 3 percent. Because of the fairly large average family size, the median age of residents in this neighborhood was lower than that of Roxbury as a whole in 1970. Census surveys in 1970 also indicate that average incomes were lower in this area than in the community at large; while 40 percent of the population earned less than \$3,000 per year, 80 percent had less than \$6,000 a year.

Neighborhood D

Neighborhood D is situated below Neighborhood C and bounded by Quincy Street on the north and Warren Street on the west and south. The Quincy MBTA line runs along its eastern border. The population here was recorded in 1970 at about 10,000. Judging by the 1970 data regarding the number of people receiving welfare assistance (50 percent) and the percentage of families receiving AFDC assistance, Neighborhood D was the poorest in Roxbury. The neighborhood was predominantly composed of black residents; there were few white or Spanish-speaking people. The neighborhood had a higher proportion of older residents in 1970 than did Roxbury as a whole.

The neighborhood's housing reflects the general conditions of housing in the surrounding areas. A little more than 20 percent of the units are vacant. A large number of buildings are in need of repair. Buildings here are somewhat larger on the average - 25 percent have a least 5 units - than those in other neighborhoods of Roxbury.

Washington Park

Washington Park, the site of the urban renewal project by that name, is bounded by Columbus Avenue and Washington Street on its west and northwest edges, while Warren Street runs along its east and northeast borders. Dudley Street crosses its northern tip and Franklin Park determines its southern boundary. In 1970, the population in this neighborhood was nearly 20,000 - twice as large as that of any other Roxbury neighborhood. Incomes at that time reached about \$7,000 on average, and only one-third of the population earned below \$5,000 a year.

Sixteen percent of the buildings in Washington Park are owner-occupied; the neighborhood owner-occupancy rate equals the Roxbury area average in this respect. Because of the urban renewal effort, more recently-built housing exists here. The neighborhood below Townsend Street and above Franklin Park is an old residential neighborhood with a number of architecturally important streets.

Overall Area Characteristics

A majority of the population in Roxbury is represented by people who are black residents (79 percent), fairly recent (i.e. less than 5 years in the neighborhood) inhabitants of the area, and/or renters rather than homeowners. The last two factors, especially, suggest the transient nature of many Roxbury neighborhoods. Furthermore, although pockets of Black middle-class settlement (notably in the urban renewal neighborhood above Franklin Park and in a small neighborhood bounded by Maywood, Warren and Moreland Streets and Blue Hill Avenue) exist in Roxbury, surrounding neighborhoods are marked by the social and economic symptoms of poverty including crime, unemployment, and very poor housing conditions.

In Roxbury, crime, which pervades the area, has been specifically associated with the prevalence of narcotics and other drugs, as well as with the area's more general phenomena of poverty and unemployment. According to the BRA, Roxbury has the highest concentration of known drug addicts in the state, and drug-related crimes are widespread. Much of this crime involves juveniles and young offenders.

Unemployment is another critical concern for Roxbury which suffers more than double the already very high state unemployment rate. Where residents are employed, earning is still low; residents earned an average income of about \$6,300 in 1970.

Housing deterioration presents a third major issue in the area. It has been related to a number of social and economic factors including high numbers of absentee landlords, inability of residents to obtain loans because of banking policies, high real estate taxes, and general hesitancy of housing developers to move into the area. Developers have been mainly discouraged by the poor profit margins, the government bureaucracy and the high cost of loans in the area. Attendant problems of steady decline in commercial and institutional activities, inadequate public transportation, and badly needed capital improvements for streets, lighting, water and sewer pipes have also played a role in discouraging new investment in the area.

Deterioration of existing neighborhoods and housing in Roxbury poses a special problem because of the unusual number of historically interesting sites in this area (See Appendix). Perhaps a more extensive range of architectural styles - including Greek Revival, Federalist, Puddingstone, Mansard, Queen Anne, Shingle style, Gothic, and even Egyptian Revival - is represented here than anywhere else in the metropolitan area. Such a stock of housing imposes particular demands on rehabilitation investment and demolition.

Recent Public and Private Investment

Federal and state funds in Roxbury have been concentrated in the Washington Park, Kittridge Square and Campus High urban renewal areas. The bulk of the money - Model Cities programs - was expended during the late 1960's. More recently, urban renewal funds have been more limited. Projects funded in the last decade include capital improvements (for example, streets, lighting, and schools), housing (over 2000 units either constructed or rehabilitated), and community programs (such as health clinics and drug rehabilitation programs).

Private investment information is limited. According to the Roxbury District Planner, however, significant scattered-site construction and rehabilitation of homes, apartments, and commercial establishments have occurred. Area D appears to have undergone the most extensive rehabilitation. New commercial renovation efforts are taking place along the upper end of Warren Street and along upper Norfolk Street. New investment in the institutional and industrial sector, however, appears to be practically non-existent.

DORCHESTER - LITTLE CITY HALL AREA PROFILE

The Dorchester Little City Hall area, incorporating 14 neighborhoods, extends from Edward Everett Square to Mattapan Square (See Figure 3) and includes a population of about 150,000. Historic centers and traditions of civic association have in many cases provided the basis for boundary definition, but to some degree neighborhood units have also been determined by other factors such as income level and racial composition of the residents or housing stock characteristics.

History of the Area

The town of Dorchester, settled and incorporated in 1630, developed for nearly 200 years as a farming region with the waterfront and the Neponset River together providing the basis for small commercial villages. After the rural town of 12,000 residents was annexed to the City of Boston in 1870, a period of very rapid expansion ensued. By 1920, with the extension of street car lines and the municipal water supply, Dorchester's population had increased to nearly its current level. In time, a variety of one- and two-family Victorian structures, as well as three-family housing in the later style known as the "triple decker," replaced the old estates. Following World War II, the availability of VA and FHA mortgages, new highway construction, and widespread automobile ownership stimulated suburban expansion in Milton, Randolph, and similar towns which drained many of the upper and middle income residents from the "old fashioned" community of Dorchester.

Area Characteristics by Neighborhood

The Dorchester neighborhoods which will be discussed below in terms of their social and economic characteristics are those most directly affected by the CDRS Spot Demolition Program and include Mount Bowdoin, Meeting House Hill, Codman Square West, and Codman Hill.

Mount Bowdoin

This neighborhood is defined by Colombia Road and Hancock Streets on the north, Bowdoin Street to the east, Washington Street on the south and the Penn Central railroad tracks to the west. This community has undergone an extremely rapid in-migration of young black families since 1960, resulting in a disproportionate percentage of children (40 percent) to elderly (13 percent). With the exception of Columbia Point, Mount Bowdoin maintains the highest proportion of below-poverty level income families and the poorest building conditions in Dorchester.

Meeting House Hill

This neighborhood is bordered by Bowdoin Street, Hancock Street, Dorchester Avenue, and Geneva Avenue. Income levels, owner-occupancy rates, residential stability and the proportion of minority populations

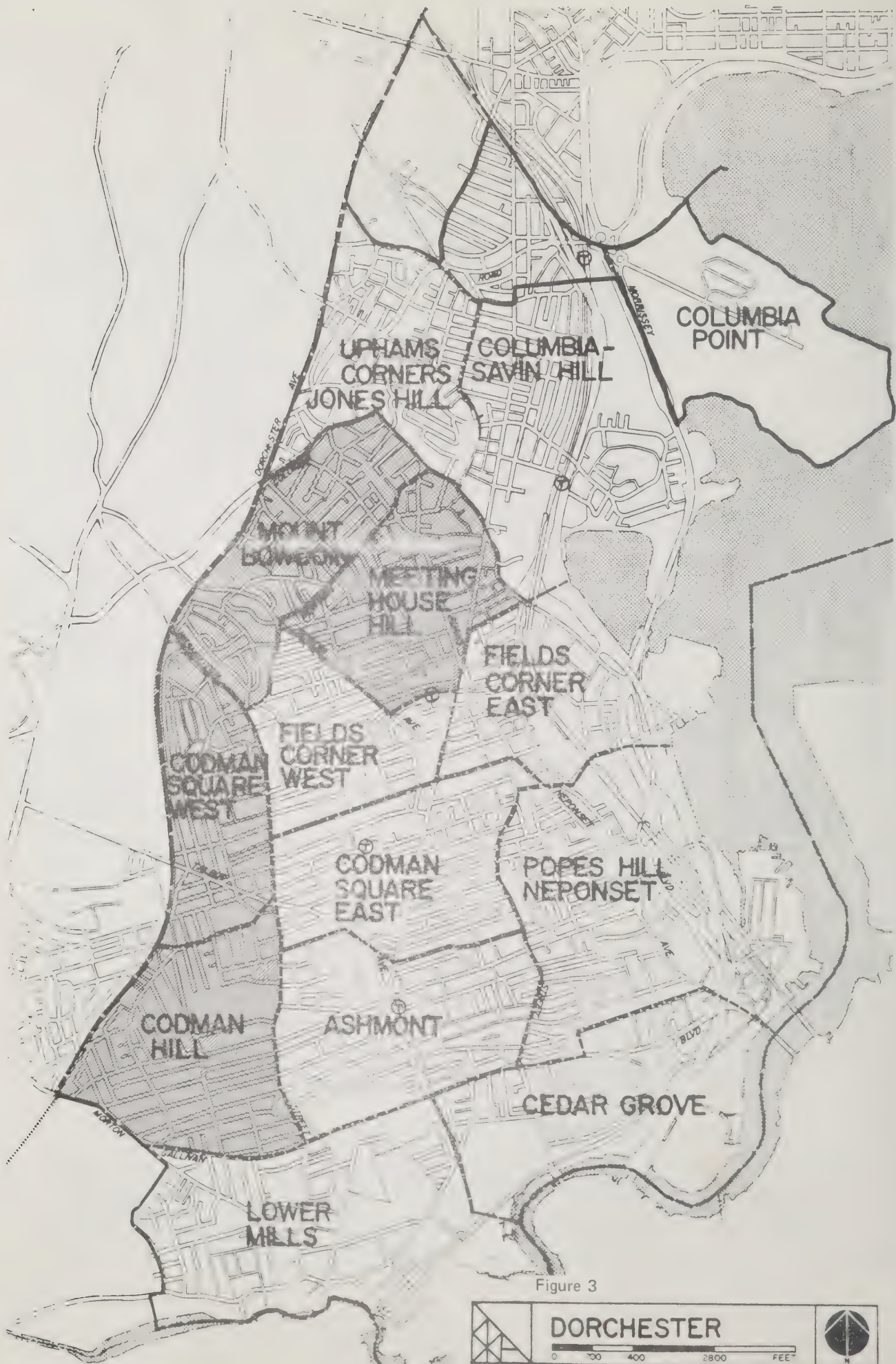


Figure 3



are shown by the 1970 census surveys to be generally like those of contiguous neighborhoods of Upham's Corner-Jones Hill and Columbia-Savin Hill. The Meeting House Hill neighborhood is the most densely developed section of Dorchester with only 21 percent of its dwelling units in one- and two-family structures. The housing stock is comprised of a few large apartment buildings and mainly "triple decker" frames. Property deterioration in recent years reflects the fears of some owners that racial change will contribute to already declining property values.

Codman Square West

This neighborhood is bordered by Washington Street to the north and east and the Penn Central Railroad-Midland Division on the west; Norfolk Street marks the southern boundary of the area. The total population in this area in 1970 was 8,100.

The most significant social and economic transitions occurred here between 1960 and 1970 when the Spanish-speaking population increased substantially to number almost 4 percent of the total population, and the black population, having comprised 1 percent of the community in 1960 grew to 53 percent in 1970. Also during this period an influx of young families led to a higher concentration of children, a lower proportion of elderly and a lower proportion of long-term residents in this area than in any other neighborhood of Dorchester. Median incomes here range from \$7,500 to \$9,000 per annum. Home ownership has remained relatively high, although low-income owners are having difficulty maintaining their property; mortgage foreclosure and building abandonment have affected this neighborhood.

Codman Hill

This neighborhood is bordered by Norfolk Street, Washington Street, Gallivan Boulevard, and the Penn Central Railroad-Midland Division. In 1970 the total population numbered 9,500. Of these about 1,000 were black residents, while the Spanish-speaking residents represented about 1 percent of the total population. Population by age category shows that this neighborhood was fairly well balanced in 1970 with 34 percent of the population under age 18 and 16 percent over 60. Residents of the area earn average to moderately high incomes (\$8,700 to \$11,000 per year). One- and two-family homes in good condition provide the basic housing stock, although there have been recent instances of abandonment and mortgage foreclosures, particularly in the northern sector near Norfolk Street and Dorchester High School. Fear of racial transition and a spillover of problems germane to the Codman Square West neighborhood are thought to have contributed to this trend.

Overall Area Characteristics

The 1970 census shows that Dorchester had more children, more population stability, higher average incomes and fewer poverty-level families than

Boston as a whole. There was also a higher percentage of homeowners. However, the negative effects of BBURG have been especially severe for Dorchester as is evidenced by high rates of mortgage foreclosure, a deteriorated housing stock, high turnover of home ownership, and considerable building demolition in the area. Associated with these economic factors, of course, are social effects such as population turnover and racial transition which are eroding neighborhood cohesion and stability.

Housing deterioration is particularly acute in an area like Dorchester, where the stock consists of predominantly older, wood frame one- to three-family structures which require a high degree of on-going maintenance. In 1970, approximately 28 percent of all housing units within the district were in need of repair in excess of \$1,000. Eighty percent of the homes were owner-occupied, although only 55 percent of the population remained in the same residence for more than five years.

Declining retail sales and security problems have afflicted Dorchester's older neighborhood commercial centers, and have already resulted in boarded up stores and business failures. This is most evident in Codman Square and in Bowdoin Street shopping districts.

Dorchester has been particularly affected by the problem of disinvestment. In areas where disinvestment has occurred, the housing stock requires moderate rehabilitation before severe deterioration triggers building abandonment and a lack of confidence in the area's future.

Recent Public and Private Investment

Over the past seven years, \$48,000,000 have been expended on a major public construction program in Dorchester. The primary thrust of the program has been the improvement of school facilities and parks and playgrounds; a new police station, library and service community center; 11 miles of streets, 9 miles of sidewalks, 8 miles of sewer and water lines; and high intensity lighting. Recent public investment in housing has included three new elderly housing developments, and tax rebates for rehabilitation of owner-occupied buildings. The 1975 investment program includes a strong effort to renovate existing housing through the establishment of three site offices for the Housing Improvement Program, almost 600 homes are scheduled to be improved.

A review of building permits for major construction or renovation since 1970 revealed substantial private investment in all sectors except housing. However, a large number of owners are making small investments (\$500 to \$5,000) to maintain and improve their properties. Investment for commercial, industrial and institutional uses shows a pattern of renovation and expansion of existing facilities rather than one of new construction.

JAMAICA PLAIN AND MISSION HILL - LITTLE CITY HALL AREA PROFILE

The Little City Hall area of Jamaica Plain encompasses both the BRA districts of Jamaica Plain and Mission Hill. The total population of the area according to the 1970 census (See Figures 4 and 5) was 58,717; of this number, 46,220 residents inhabited Jamaica Plain and a far smaller number of 12,497 lived in the Mission Hill area. Each of these two communities is characterized by distinctive special features; i.e. Jamaica Plain by its combination of high-class residential housing in some areas and deteriorated former working-class neighborhoods in others; and Mission Hill by the overwhelming degree of institutional incursion into its area. Historically, the two neighborhoods have been considered as completely separate areas. Therefore, although both fall under the jurisdiction of one Little City Hall, the two communities will be treated as two separate areas in this section of the report.

JAMAICA PLAIN

Jamaica Plain encompasses eight neighborhoods: Jamaica Pond, Jamaica Hills, Jamaica South, Jamaica Central, Egleston Square, Hyde Square, Stoneybrook, and Woodbourne. The neighborhoods divide roughly into those which grew up around large estates in the western half of the district and have always been relatively affluent, and those which were originally developed as working class districts, along the length of Washington Street.

History of the Area - Jamaica Plain

This area originally was included within the boundaries of the town of Roxbury. For over 150 years the land was tilled for farming and supplied most of the fruit and vegetables for Boston. Prosperous farmers and wealthy townsmen created large estates near Jamaica Pond and what is today the Arnold Arboretum. These early patterns of settlement are still reflected in the Jamaica Plain neighborhoods.

Jamaica Plain was developed earlier than Mission Hill. A water supply aqueduct was built in 1795, to provide Boston with water. It attracted tanneries and breweries which were set up along the central and upper reaches of the area. The railroad line down Washington Street, which was completed in 1834, brought further growth, primarily in the industrial section of Jamaica Plain. By the turn of the century many of the fine old estates in the south had been subdivided. The interior sections of Jamaica Plain developed rapidly with the building of new streets; Jamaica Central, in particular, had a burst of growth.

Large, attractive, and expensive single-family homes of the upper middle classes replaced the very grand estates along the western and southern edge of Jamaica Pond, Jamaica Hills and Jamaica South. By contrast, the dilapidated housing of Egleston Square, Hyde Square and parts of Jamaica Central and Stoneybrook reflects the fact that here many structures were originally built as "instant tenements" for immigrant workers.

Area Characteristics by Neighborhood - Jamaica Plain

Since Jamaica Central, Egleston Square, Hyde Square, Stoneybrook, and Woodbourne, are the neighborhoods most affected by residential abandonment, we shall present only these neighborhoods in the profile below.

Jamaica Central

Bounded by Centre Street, South Street and the Penn Central Railroad - Midland Division, Jamaica Central lies in the very heart of Jamaica Plain. Median family income is in the range from \$7,186 to \$12,653; according to 1970 census statistics, about 20 percent of families earned less than \$5,000. Settlement in the neighborhood is dense: nearly 10,000 people live in an area shaped roughly like a parallelogram 1 mile long by one-half mile wide. Much of the housing is two- and three-family, wood-frame structures built prior to 1920. Partly because of age and poor construction, about 15 percent of houses are by now in either fair or poor condition. Over 200 units presently need rehabilitation which will cost more than \$1,000.

Along the eastern edge of Jamaica Central runs a large swath of land which originally was cleared for the Southwest Corridor expressway. The existence of these empty tracts, as well as uncertainty about its future, has contributed to disinvestment and abandonment along the route. Restrictive bank lending practices also have reinforced this trend. Most of the poorer housing borders the path of the corridor sites.

Egleston Square

Lying east of Jamaica Central is the Egleston Square neighborhood. Franklin Park and Columbus Avenue on the north and east, and Green Street/Glen Road and the Penn Central Railroad - Midland Division - on the south and west mark the perimeter of Egleston Square. The total population of the neighborhood in 1970 numbered about 7,700. More than 20% of the population is black in this community which shares a border with Roxbury. There is a small but growing Spanish-speaking community. The 1970 median family income was only \$7,549; 26 percent of the families earned less than \$5,000

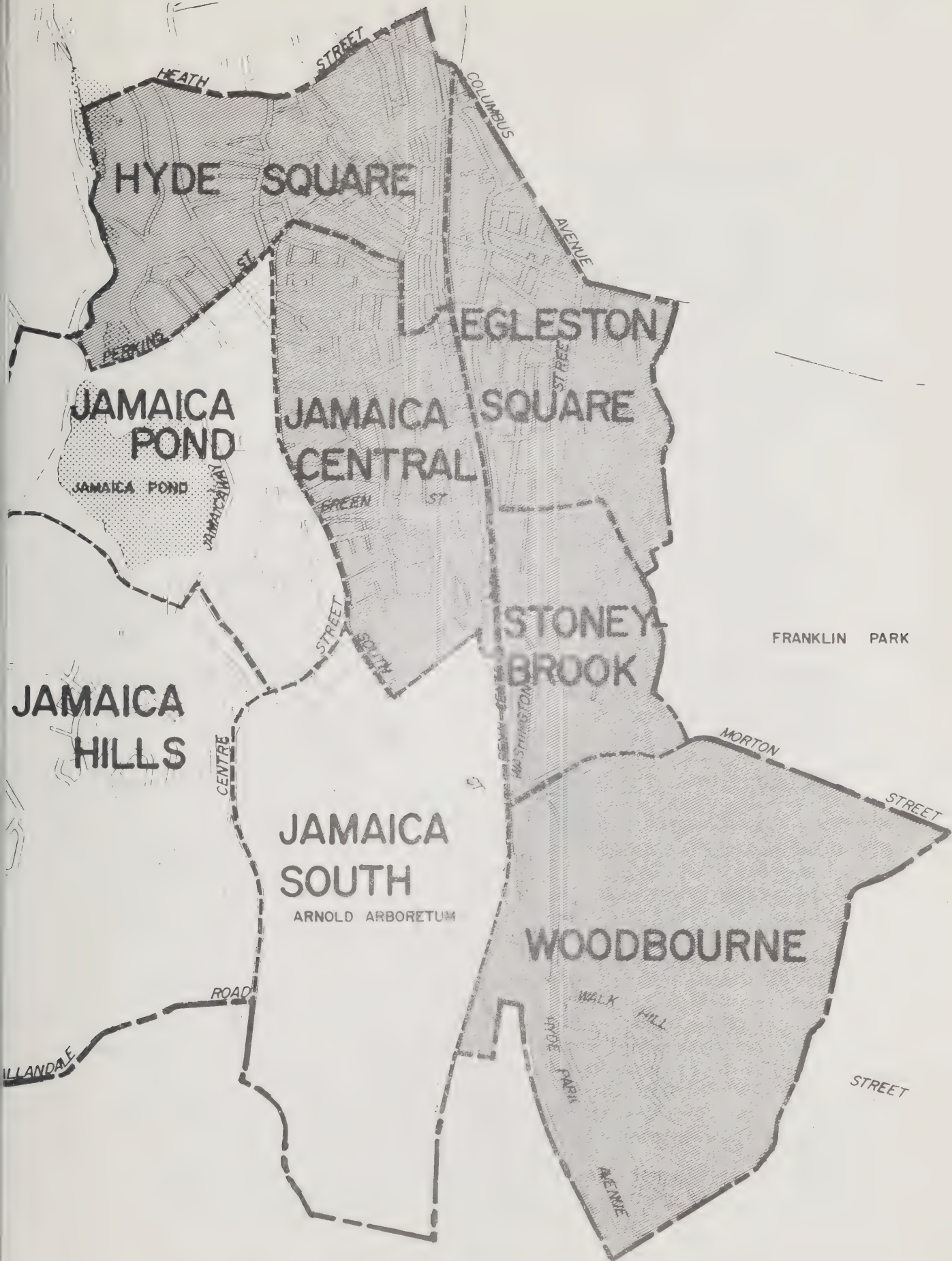


Figure 4

JAMAICA PLAIN

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Spanish-speaking groups. Altogether, almost 9,800 people lived in Hyde Square in 1970.

The housing closest to the Jamaicaaway is in good condition but deteriorates in the northeastern section of the neighborhood, particularly at the junction of Heath Street and the railroad tracks. Bromley-Heath, one of the biggest housing projects in the city, contained about 3,670 people. In 1967, only 40 percent of the housing units in the census tract which includes the projects was in good condition. The commercial area has experienced a distinct revitalization; owner occupied homes are being rehabilitated, and some formerly abandoned homes are being reoccupied.

Woodbourne

Woodbourne lies in the southernmost tip of Jamaica Plain; Franklin Park and Stoneybrook border it on the east and north and the Penn Central Railroad - Midland Division separates it from Arnold Arboretum. According to 1970 census data, its population of about 6,000 people is nearly 100 percent white. Median income fell between \$9,000 and \$12,000 per year. The neighborhood has a 40 percent owner-occupancy rate. However, some housing abandonment is obvious along the southern link of the proposed Southwest Corridor where large vacant land-parcels and boarded structures line Hyde Park Avenue. The neighborhood remains relatively free of the major problems of other poorer neighborhoods in Jamaica Plain. In fact, it is more socially akin to the Roslindale district of Boston which it physically adjoins.

Overall Area Characteristics - Jamaica Plain

Preserving the stability of Jamaica Plain is a central goal of the Jamaica Plain Community. Already, for example, in Egleston Square, federal, state and city funds have been directed toward major rehabilitation efforts; new housing for the elderly has been created by the conversion of an old factory building and a leased-housing program is in effect. However, there have also been numerous impediments to this goal. On the one hand, restrictive bank lending policies have reduced the availability of mortgage and rehabilitation money to the area. Further, uncertainty about the future of the vacant land area that was originally set aside for the Southwest Corridor has led to moderate amounts of abandonment in neighborhoods border the Corridor, even including the middle income residential neighborhood, Woodbourne. Abandonment poses an even more severe threat in Hyde Square, Egleston Square, Jamaica Central and Stoneybrook.

per year, an income level which is the second lowest in Jamaica Plain (after Hyde Square).

Much of the residential housing was built in the early 1900's to accomodate immigrant workers in the area. The neighborhood possesses some single-family housing scattered throughout, but most of the housing is wood frame, two- and three- family structures; 23 percent of the units are owner-occupied. More than 1,000 homes were identified in 1970 as needing major repair. In addition to the problem of housing deterioration, Egleston must contend with the issues of its commercial district: the Washington Avenue "El" which bisects Egleston Square, creates a dirty, noisy and uninviting environment that contributes to decline in the variety and quality of commercial enterprises.

Together with Stoneybrook, lying just to the south, Egleston Square contains the bulk of industry in Jamaica Plain. The industrial base, however, is deteriorating. Many of the industries are inefficient, unable to compete with new technological processes, and lack access to major transportation routes.

Stoneybrook

Immediately south of Egleston Square, bounded by the Arborway, Glen Road/Green Street, the Penn Central Railroad - Midland Division, and Franklin Park, sits the small neighborhood of Stoneybrook. It is about half the size and has less than half the population of Egleston Square but it shares many of the same characteristics. Its fairly large industrial district functions only marginally. In 1970, it had the second lowest percentage of owner-occupied housing (17 percent in Jamaica Plain). Median income was in the range from \$7,100 to \$12,000, and 20 percent of the neighborhood families had incomes below \$5,000 a year. The population of Stoneybrook differs from Egleston Square in that it is 95 percent white. The housing characteristics are somewhat similar to those in Egleston Square; that is, densely settled, and three-family wood structures, originally built to house factory workers.

Hyde Square

Hyde Square's southern boundary is Perkins Street, which dips down over the top of Jamaica Pond. As a result of the large number of poor people in the project, the average income level for Hyde Square was estimated in 1970 to be the lowest in Jamaica Plain; 35 percent of the families living there make less than \$5,000 per year. Only 14 percent of housing units are owner-occupied with the result that Hyde Square has the lowest owner-occupancy rate in Jamaica Plain. Non-public housing residents are a mix of older, long-term residents and newer immigrants, to the area: Greeks, Cubans and other

There are two related economic issues of concern in the district of Jamaica Plain: commercial center decline and the problem of industrial land use. Small commercial districts appear to be suffering from the decline in the economic strength of the surrounding poor neighborhoods. Industrial land use poses problems of a special nature. In some neighborhoods, notably Egleston Square and Stoneybrook, local industries are deteriorating without being replaced by new light industry. Street improvements, special industrial zones, and perhaps tax programs are among possible strategies for encouraging fresh industrial uses in the area. From 1968 to 1974 over \$17,800,000 in public capital expenditure was made in Jamaica Plain. Increases in expenditures during this period were much greater than in any previous period. The major thrust of the capital investment has been toward strengthening neighborhoods through the construction or renovation of community facilities, parks and streets.

Public effort in housing has been directed toward three areas of activity: conservation, leased housing, and rehabilitation. The old Holtzer-Cabot factory building on Amory Street, for example, was converted by the Boston Housing Authority to 223 units of low income elderly housing, demonstrating the ability to reclaim industrial property for residential use. Under the leased housing program, on the other hand, the Boston Housing Authority has been able to provide low- and moderate-income families and individuals with attractive housing. Many residential units were also rehabilitated under FHA programs; and, the MHFA completed a superior rehabilitation project at Cleaves Court. Since September 1973 the Mayor's Housing Improvement Program has encouraged the private rehabilitation of over 81 homes in the district. The program has helped preserve housing stock in the neighborhood by offering tax rebates to homeowners who complete certain home improvements.

A review of building permits for private construction activity in excess of \$10,000 shows that there has been substantial residential, commercial and institutional investment in Jamaica Plain from 1968 to the present. A great proportion of the total private investment has been directed toward the new Faulkner Hospital. Other institutional investment, however, has also occurred and has been evenly distributed throughout Jamaica Plain. Most activity in the area of residential construction and rehabilitation has taken place in the Jamaica Hills/Jamaica Pond area. Investment in commercial sites has been concentrated along Centre Street; and was evenly divided between new structures and rehabilitation or alteration of existing buildings.

MISSION HILL

Mission Hill lies below the area known as the Fens, that is, below Huntington Avenue, bounded on the west by Olmstead Park and on the east by northern Roxbury. The total area is very small -- less than one square mile. Nevertheless, four distinct residential neighborhoods have been identified: Roxbury Tenants of Harvard, Mission Hill Project, Mission Hill Proper and the Back of the Hill.

History of the Area - Mission Hill

The smaller half of the area, Mission Hill, was transformed in the 1870's from small farms to urban streets, with rowhouses and two- and three-family homes. While Jamaica Plain was settled primarily as a residential area with pockets of industry, Mission Hill early attracted hospitals and schools from their downtown locations. Between 1900 and 1917, the New England Baptist Hospital, Harvard Medical School, Peter Bent Brigham and Children's Hospital moved to Mission Hill. All the other hospitals presently in the district were built by the end of World War II. The density of institutional development and the need for expansion have created conflict within the Mission Hill neighborhood so that recent tenant organizations have become a prominent feature of the neighborhood.

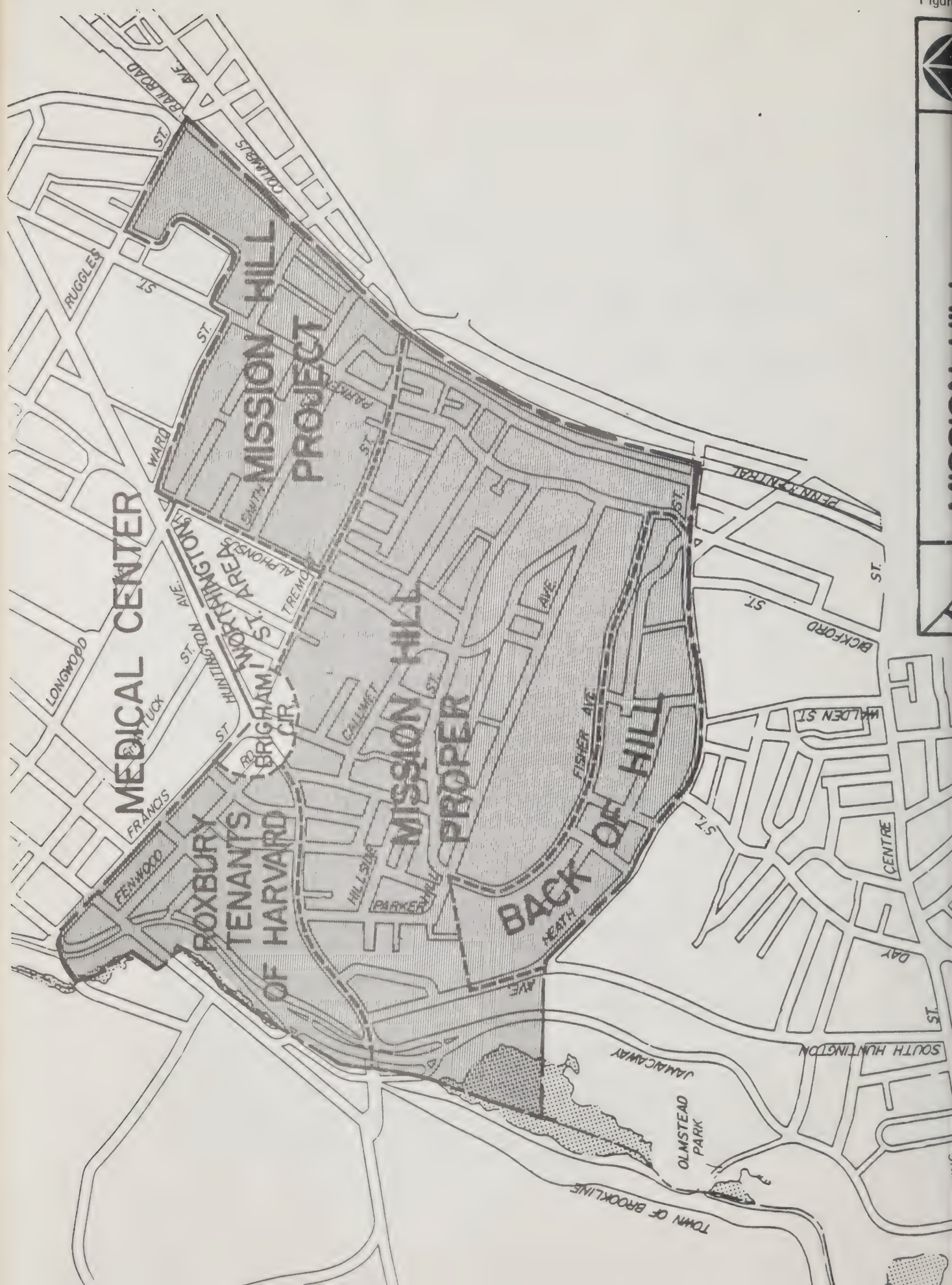
Irish Catholic families have traditionally been the denizens of Mission Hill. Gradually, however, there has been an influx of newcomers attracted by employment prospects, blue-collar workers, students, and middle-to-upper -income professionals. Mission Hill also made way for one of Boston's earliest public housing projects.

Area Characteristics by Neighborhood - Mission Hill

Since little data is available by neighborhood for this area, socio-economic characteristics will be left to the next section where they are discussed in terms of the area as a whole. Here, however, we will include brief descriptions of Mission Hill Proper, Back of the Hill, Roxbury, Tenants of Harvard and Mission Hill Housing Project in order to emphasize the variety of these four neighborhoods within Mission Hill.

Mission Hill Proper

This neighborhood comprises an area approximately half of Mission Hill. It is bounded by Huntington and South Huntington Avenues, Tremont Street, Fisher Avenue and the Penn Central Railroad - Midland Division. Parker Hill, the central land mass of the neighborhood has had a significant impact on the layout of the residential area. Streets are cut into the hill and loop around it, while two- and



three-family houses are densely packed along the streets. Concern over expansion of doctors' and nurses' residences is the major housing concern here. Further, the community strongly opposes any encroachment by either the city or the private sector on the open space at the top of Parker Hill, which at the moment is used as a playground.

Back of the Hill

At the bottom of Parker Hill lies a small, sinuous strip of land, defined by Fisher Avenue, Parker Street, Heath Street and Parker Hill Avenue, called "Back of the Hill." Twenty-three acres of predominantly vacant land exist here because approximately 150 buildings have been razed over the last 10 years through institutional "land-banking." Neighborhood interest focuses on the need to save these parcels of land for residential redevelopment. Residents also feel that remaining residential structures should be preserved.

Roxbury Tenants of Harvard

The neighborhood of the Roxbury Tenants of Harvard will be the site of 774 new units of subsidized housing co-sponsored by Harvard University and the tenants' organization from which the neighborhood takes its name. The new housing project is expected to improve the residential character of the community; sensitive planning has provided for a mix of low-, middle-, and upper-income units and the construction of both multi-story and single-story structures in this neighborhood. Planned open space also will be a feature of this site. The tenants have already been successful in securing some funds for rehabilitation of existing housing in the neighborhood and many renovation projects have already been completed.

Mission Hill Housing Project

The neighborhood of Mission Hill Housing Project is defined by the area between St. Alphonsus Street, Ward Street, Annunciation Road, Ruggles Street and the Penn Central Railroad - Midland Division. Nearly 1,600 units of housing stand in this neighborhood, but in general they are badly deteriorated. Because the neighborhood is dominated by the public housing project from which its name derives, the income status of the majority of residents here is consistently low.

Overall Area Characteristics - Mission Hill

Mission Hill is an amalgam of high and low income, new and old, blue-collar and white-collar, white and non-white residents. According to 1970 census data about 81 percent of the 12,000 area residents were white, 12 percent were Black, and 5 percent were of Spanish-speaking origin. In an area where median income was in the range from \$4,475 to

\$8,625, about 24 percent of Mission Hill families earned less than \$5,000 per year. Many of the people in this low income category are probably residents in the public housing project. In respect to population movement trends, the 1970 data shows that children and old people tended to leave Mission Hill, but the numbers of young people in the area between the ages of 20 and 24 increased by 59 percent. The statistics thus reflect the growing body of students, young professionals, and young couples in Mission Hill.

Total dwelling units in Mission Hill equalled 4,995 in 1970. About 33 percent of the housing units were owner-occupied, but on the whole rental units provide the majority of housing stock in the area. Most rental units are located in old buildings, but rents are relatively high because of the demand for housing in the neighborhood. About 70 per cent of housing units are what can be described as "in good condition", even though minor repair may be needed. Nonetheless, there is a heavy demand for more housing in the area to meet the needs of all residents of all income ranges. With the exception of the 700 units of multi-family housing in the Whitney Urban Renewal Area, and a number of buildings along Parker Hill Avenue, there has been very little new construction in the past 10 years. Especially in the Back of the Hill neighborhood, vacant land is available for such development. As has been stated above in the profiles of individual neighborhoods, residents in Mission Hill are particularly anxious not to lose any further land area to institutions hoping to expand further into the residential community.

Particular areas of Mission Hill have suffered from special problems such as the lack of confidence fostered by the uncertainty over the vacant tracts resulting from the Southwest Corridor project. Furthermore, there has been some concern over the deterioration of commercial centers. Brigham Circle, for instance, which lies in the heart of Mission Hill has become less attractive because of rising crime, inadequate lighting, severe traffic congestion, and poor storefront maintenance. When fewer customers frequent the district, services are eliminated and a downward spiral of decline begins.

Recent Public and Private Investment

Since 1970 the major goal of the City's Capital Improvement Program has been to strengthen neighborhoods through construction and renovation of community facilities and parks, reconstruction of streets, and replacement of sewer and water lines. The City spent \$300,000 for the renovation of the Community Recreation Building at 68A Annunciation Road in the Mission Hill Project, and provided funds to renovate playground facilities at McLaughlin and Mission Hill playgrounds. At the same time, over 25 streets were reconstructed or resurfaced, and sewer and

water line improvements were carried out in 10 streets.

A review of building permits for private construction activities in excess of \$10,000 indicates that there has been substantial institutional investment in the Mission Hill/Medical Center Area, most of which has been concentrated in the Brigham Circle/Francis Street area. In addition, private investment has been made in new retail construction along Huntington Avenue and in residential rehabilitation along Huntington and South Huntington Avenues.

SOUTH BOSTON - LITTLE CITY HALL AREA PROFILE

The South Boston Little City Hall area, defined by its natural peninsular boundaries on three sides and by the Southeast Expressway to the west, is comprised of seven subareas -- Northern Section, West Broadway, "D" Street, City Point, Telegraph Hill, Andrew Square, and Columbus Park (See Figure 6). The population of the area reached 38,488 persons in 1970.

History of the Area

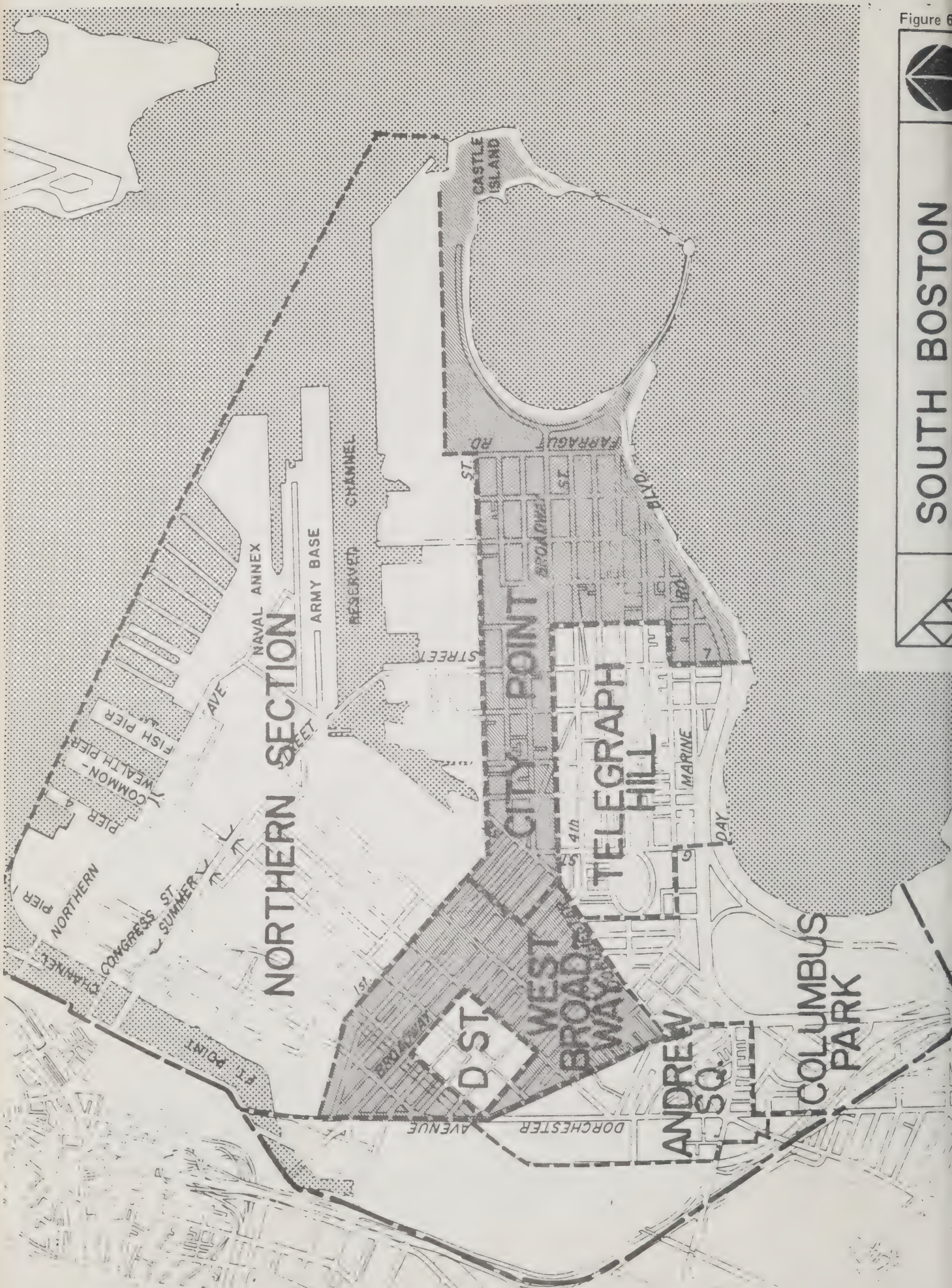
Founded in 1630, South Boston was annexed to Boston in 1804. One year later, the first bridge connecting South Boston to Boston proper was constructed, and the district's characteristic grid street pattern was designated. The pace of development, which had been moderate to this point, began to accelerate in the 1830's as new connector bridges were erected and the northern marshland was filled for industrial development. South Boston was settled almost exclusively by Irish immigrant industrial laborers and their families from the 1830's through the 1870's when the great Boston fire in 1874 brought other immigrant groups into the district including Lithuanians, Poles, and Italians. The extension of streetcar service to the southern and eastern shores in 1890 led to the completion of the community's residential growth. Industrial and warehousing developments, however, continued to be fostered well into the twentieth century.

Area Characteristics by Neighborhood

Of all the South Boston neighborhoods, West Broadway and City Point are considered in further detail below because of their importance in the CDRS Spot Demolition Program.

City Point

This neighborhood is located in the eastern section of South Boston between First Street and East Broadway; it includes most of the Day Boulevard shoreline. City Point incorporates a portion of the commercial center along Broadway, several heavy industrial enterprises on First Street, and a number of public open space areas--Independence Park, Christopher Lee Playground, Marine Park, Pleasure Bay, and Castle Island.



The population of City Point declined from 1960 to 1970 by 7.5 percent to 11,378; there was a sizable loss of children under the age of 10 years and a slight increase of young adults and elderly during this period. The 1970 median family income for the sub-area ranged from \$8,663 to \$10,183, with a relatively low percentage (18 percent) of City Point's families earning less than \$5,000.

In City Point, housing stock consists throughout of a few large, single and two-family detached houses, wooden triple-deckers and brick or frame row houses of predominantly good to fair condition. Over 27 percent of the units are owner-occupied; however, only 37.2 percent of the 1970 population had lived in the same house for five years or more, thus, indicating a high degree of mobility. In recent years, housing deterioration has been most evident along the northern edge of the neighborhood (First Street) adjacent to the industrial sector.

West Broadway

This neighborhood is bounded roughly by West First Street, Dorchester Avenue, Old Colony Avenue, Dorchester Street, West Broadway, and "F" Street, includes the major segment of South Boston's central business district on Broadway, as well as a number of industries and commercial warehouses in the northwestern periphery.

The median family income for the area ranges from \$7,100 to \$9,316 per year with almost 25 percent of West Broadway's families earning less than \$5,000.

Roughly 28 percent of the neighborhood's housing units are owner-occupied, and about 53 percent of the residents have remained in the same house for five or more years. Between 1960 and 1970, the population of West Broadway declined by about a quarter so that a total of 5,455 persons remained in 1970. These were decreases in population in all age categories; most notably, in the 0-9 years category. Much of this population decline is ascribed to the blighting influence of the "D" Street housing project, centrally located in the West Broadway neighborhood, and the encroachment of surrounding industry on the residential community.

Brick or wooden frame rowhouse structure predominate in the residential sections of the neighborhood and are in fair condition in general. Some, however, are in poor repair and a few are considered to be in good status. Signs of abandonment and extreme deterioration are evident in the area; many vacant lots have become hazardous, unsightly repositories of debris or wrecked cars.

Overall Area Characteristics

The area of South Boston lost over one-third of its population during the twenty-year period between 1950 and 1970. Children under 9 years, in particular, were part of a diminishing category. By contrast, in more recent years the elderly population has increased, apparently as a result of the construction of two elderly housing projects within the past 15 years. Although the majority of South Boston's population has been Irish since the early nineteenth century, this plurality has been decreasing. Eastern European, French Canadian, and Italian populations are growing; on the other hand, the black community as of 1970 still remained a tiny proportion (1 percent) of the whole. As the community diversifies, South Boston's strong sense of community, rooted in the district's physical separation from the rest of the city, its generous apportionment of parks and beaches, and its long traditions, begins to show signs of erosion.

It's housing supply has begun to erode as well. Of the older houses, 90 percent were built before 1939 and now require major reinvestment for rehabilitation and maintenance; the costs far exceed what owners can afford. Deterioration and abandonment are increasingly more evident, and vandalism and fire threaten these abandoned structures.

Like the housing stock, the antiquated commercial centers in South Boston need substantial investment before rehabilitation and transportation improvements can be carried out. Further, stricter security precautions must be enforced before the full development potential of this area can be realized.

Recent Public and Private Investment

Public works improvements; the construction and maintenance of public facilities, parks, and recreational facilities; and the development of one Federally subsidized and three BHA-leased housing projects have constituted the bulk of past public investment in South Boston between 1968 and 1974. Private investments occurred between 1970 and 1974 in the form of commercial, residential, industrial, and institutional rehabilitation and construction activities: these have been primarily concentrated along Dorchester Avenue, West Broadway, First Street, Northern Avenue, Summer Street, and the Fort Point Channel.

In 1975, the city is scheduled to spend over \$11,000,000 on the continued construction and rehabilitation of public works, and traffic and parking improvements. A central element is the Housing Improvement Program funded through Community Development Revenue Sharing, which provides rehabilitation incentive through rebates to residential owners of 1-6 unit structures. Funds have been reserved for the refurbishing of approximately 100 residential buildings, the demolition of about 30 abandoned houses, and for the restoration of 30 vacant lots in South Boston.

FRANKLIN FIELD - LITTLE CITY HALL AREA PROFILE

The Franklin Field Little City Hall area encompasses two extensive open space areas - Franklin Field and Franklin Park - and four residential neighborhoods - Columbia-Blue Hill, Franklin Hill - Harvard, Franklin Field South, and Woodrow Morton (See Figure 7). Population of the area had reached about 33,929 by 1970.

History of the Area

Franklin Field, originally part of Dorchester, was annexed to Boston in 1870. The advent of railroad passenger service on the Midlands Branch in 1855 and trolley service along Blue Hill Avenue in the 1890's spurred the rapid construction of two- and three-family homes for the Irish and other immigrants. Jewish families displaced by the Chelsea Fire of 1908 largely replaced the Irish community, and in turn, have recently been replaced by blacks forced to abandon their homes by urban renewal activities of the 1960's.

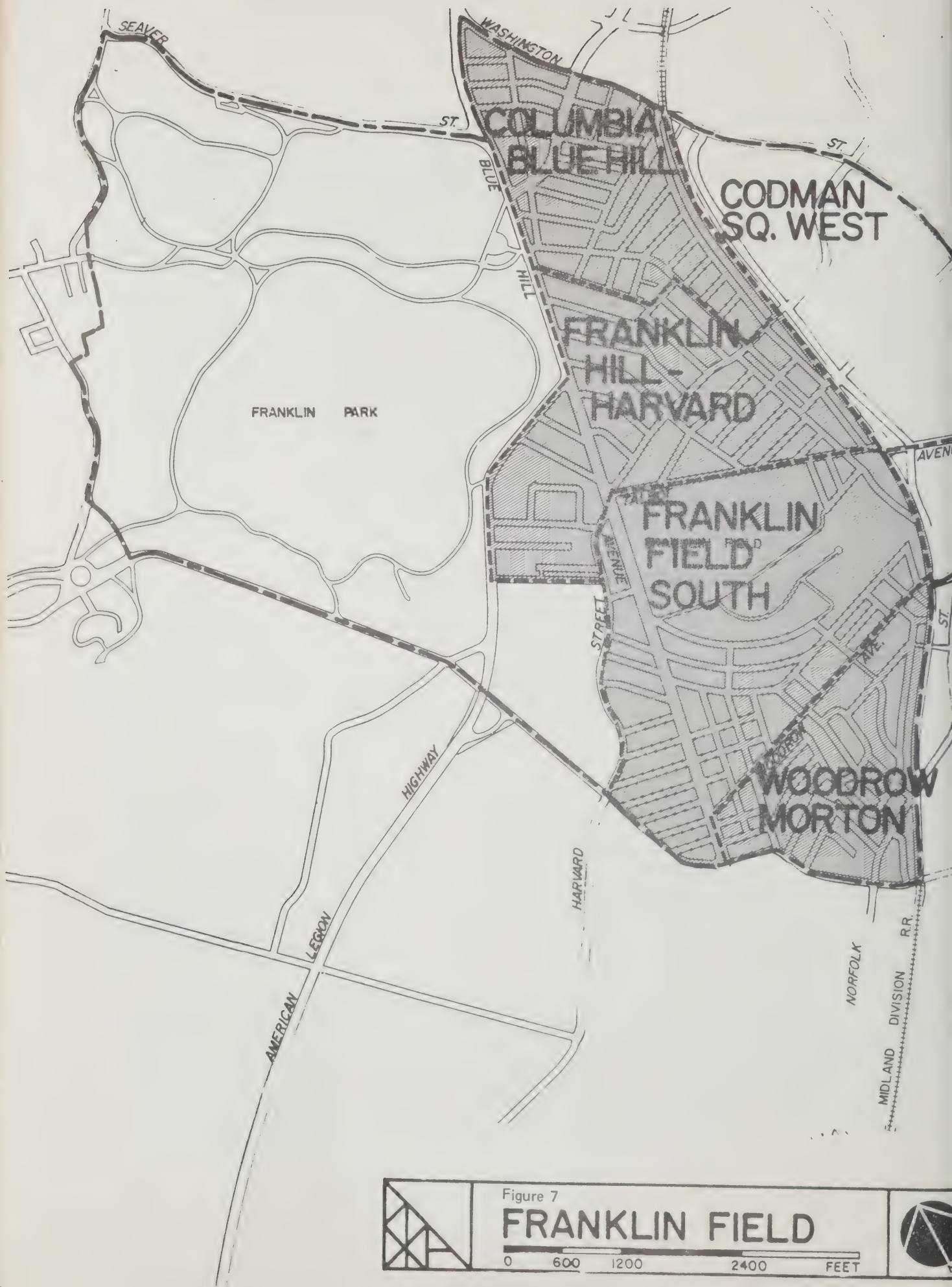
Area Characteristics by Neighborhood

Although portions of Roxbury's area "D," and Dorchester's Mount Bowdoin, Codman Square West, and Codman Hill neighborhoods overlap the Franklin Field area on its peripheries, these communities are grouped in the Roxbury and Dorchester area profiles because they are more closely affiliated with these communities. Below, Columbia-Blue Hill, Franklin Hill-Harvard, Franklin Field South, and Woodrow Morton, the 4 major residential neighborhoods of the Franklin Field area, are discussed in terms of their predominant social and economic features.

Columbia-Blue Hill

This neighborhood lies in the northern most part of Franklin Field. It is bounded by Blue Hill Avenue, Washington Street, the Penn Railroad-Midland Division, and McClellan and Glenway Streets. From 1960 to 1970, the community here underwent substantial demographic changes. Although there was little variation in total population of approximately 6,400, the number of children between 0 and 14 years increased by about 34 percent during this period, while there was a 28 percent decrease in the number of elderly (64 years and older). The total black population of the community changed radically, increasing from 1,605 persons in 1960 to 6,036 persons in 1970.

Of the 2,010 dwelling units within the Columbia-Blue Hill, roughly 80 percent are owner-occupied, one to four family structures. In addition, there are a few apartment buildings located on Blue Hill Avenue, Columbia Road, and Washington Street. Some abandonment and dilapidation appears scattered throughout the area, and several



vacant lots are found at the corner of Eric and Ellington Streets. The majority of the housing stock, however, is considered to be in good condition, with only 730 units in need of repairs exceeding \$1,000. Overcrowding in neighborhood schools and recreational facilities has become an issue of particular concern to the community because of the sharp increase in the population of children mentioned above.

Franklin Hill Harvard

This neighborhood lies between Columbia-Blue Hill and Franklin Field South. It is bordered to the east by the Midland Division railroad and Franklin Park on the west. In this neighborhood elderly households have been gradually displaced by younger households with small children with the result that there has been a 36 percent population increase of children aged 0 to 14 years. The black population increased by 93 percent between 1960 and 1970 with the result that black families now represent about 41 percent of the community.

One, two, and three-family houses predominate in the area, with the exception of Franklin Hill where there are mainly low and moderate income apartments. Approximately 73 percent of these buildings are owner-occupied, although 66 percent of the families move before five years of residency. There is noticeable deterioration of housing in the area due to lack of proper maintenance generally attributed to racial change in the neighborhood. Further, several unfinished "Infill Housing" structures and other abandoned buildings are located throughout the community. Nearly 63 percent of the total dwelling units are presently in need of repairs in excess of \$1,000.

Franklin Field South

This neighborhood is situated between Talbot Avenue and Woodrow Avenue in Franklin Field; The Penn Central Railroad - Midland Division - and Harvard Street lie to the east and west, respectively. Between 1960 and 1970, the total population declined by approximately 4 percent to 7,623. The total black population, however, increased from 102 to 5,583 during this period.

The homes in Franklin Field South are largely two- and three-family structures, although a few single- and six-family buildings can be found, and almost 1,000 apartments are located in the BHA projects at Franklin Field. Approximately 73 percent of the housing is owner-occupied, and in 1970, 1,330 units were in need of major repairs exceeding \$1,000 per unit. Deferred maintenance and increased absentee ownership related to the significant racial transition the area have lead to some housing deterioration. Vacancies

and mortgage foreclosures are high in the area, particularly within three blocks of Arbutus Street where roughly 55 abandoned structures are found.

Woodrow-Morton

This neighborhood is bounded by Woodrow Avenue, the Penn Central Railroad - Midland Division, Morton Street, and Blue Hill Avenue. Unlike the showing in other sections of Franklin Field, total population here increased by 12 percent between 1960 and 1970 to 4,340 and was accompanied by a slight rise in median income. The population increase is due in part to the displacement of the elderly community by younger households with small children, as reflected by an estimated 58 percent decline in population of persons aged 64 years and over and a 49 percent rise in the 0 to 14 year age category. The black population increased from 20 in 1960 to 2,991 in 1970, or by approximately 99 percent.

The housing stock is comprised of mostly two- and three-family structures, with a few single- and six-family buildings. These homes have been maintained in good condition and show an owner-occupancy rate of 78 percent. There are, however, some instances of abandonment throughout this area.

Overall Area Characteristics

Crime has become a serious problem in the Franklin Field district, and the fear of crime has contributed to residential instability and the decline of commercial areas. Drug traffic is high, alcoholism is on the rise among the area's youth, vandalism, theft, and arson occur in abandoned buildings. Robberies and purse snatchings have reduced the commercial viability of Blue Hill Avenue, and residents, especially in households which are empty during the day, are fearful of burglaries. Moreover, Franklin Park, which continues to be underutilized despite the fact that a strong demand for recreational opportunity exists (as evidenced by the popularity of Arnold Arboretum and Dorchester Park), presents a special problem; its residents perceive it as attracting crime.

The residential housing stock in Franklin Field is basically sound; however, it is currently threatened by many factors, including the need for minor interior and exterior repairs and the inaccessibility of home improvement loans and mortgages for major renovations. Housing abandonment has posed a serious problem in the area for several years, one which continues to grow as owners lose confidence in their neighborhood's future. Housing in disrepair caused by a lack of maintenance and modernization has resulted in increasing vacancies in Franklin Hill and Franklin Field housing

projects. If this trend persists, these projects could become centers of deterioration and crime.

Recent Public and Private Investment

The City of Boston is scheduled to invest \$2.5 million during 1975 in the Franklin Field area for neighborhood improvements. The demolition and boarding program will be developed in co-operation with community residents and the Little City Hall, and a site office will be located on Blue Hill Avenue for the Housing Improvement Program. In addition, the City will be spending \$250,000 for improvements for residential streets, sidewalks, and street lighting. The new Charles Drew Family Life Center will provide increased health and social services for the area.

There has been very little private investment in Franklin Field District, with the exception of renovation of several stores at the Morton Street Shopping Center, and indoor/outdoor tennis facilities at Franklin Field. No investments in new construction or major housing rehabilitation have been made.

UPHAM'S CORNER - LITTLE CITY HALL AREA PROFILE

Upham's Corner is historically part of Dorchester, but its neighborhoods, including Upham's Corner-Jones Hill, Columbia Point, and portions of Columbia-Savin Hill have been organized into a separate Little City Hall area. In addition, this LCH area has rather different population and housing characteristics from the neighborhoods of Dorchester (see Figure 8). The two neighborhoods, Columbia-Savin Hill and Mount Bowdoin which are only partly included in the Upham's Corner area will not be considered here, but will be found in the Dorchester area profile. Total population figures for this district would have to be arbitrarily decided because of the inclusion of parts of neighborhoods in the Little City Hall area. The population of Upham's Corner-Jones Hill and Columbia Point, the two neighborhoods falling entirely within the Little City Hall area, is 14,400.

History of the Area

The history of Upham's Corner is similar to that of Dorchester, since the social and economic development of the two areas has been interdependent.

Area Characteristics by Neighborhood

Only the Upham's Corner-Jones Hill vicinity will be affected significantly enough by the CDRS Demolition Program to warrant closer examination.

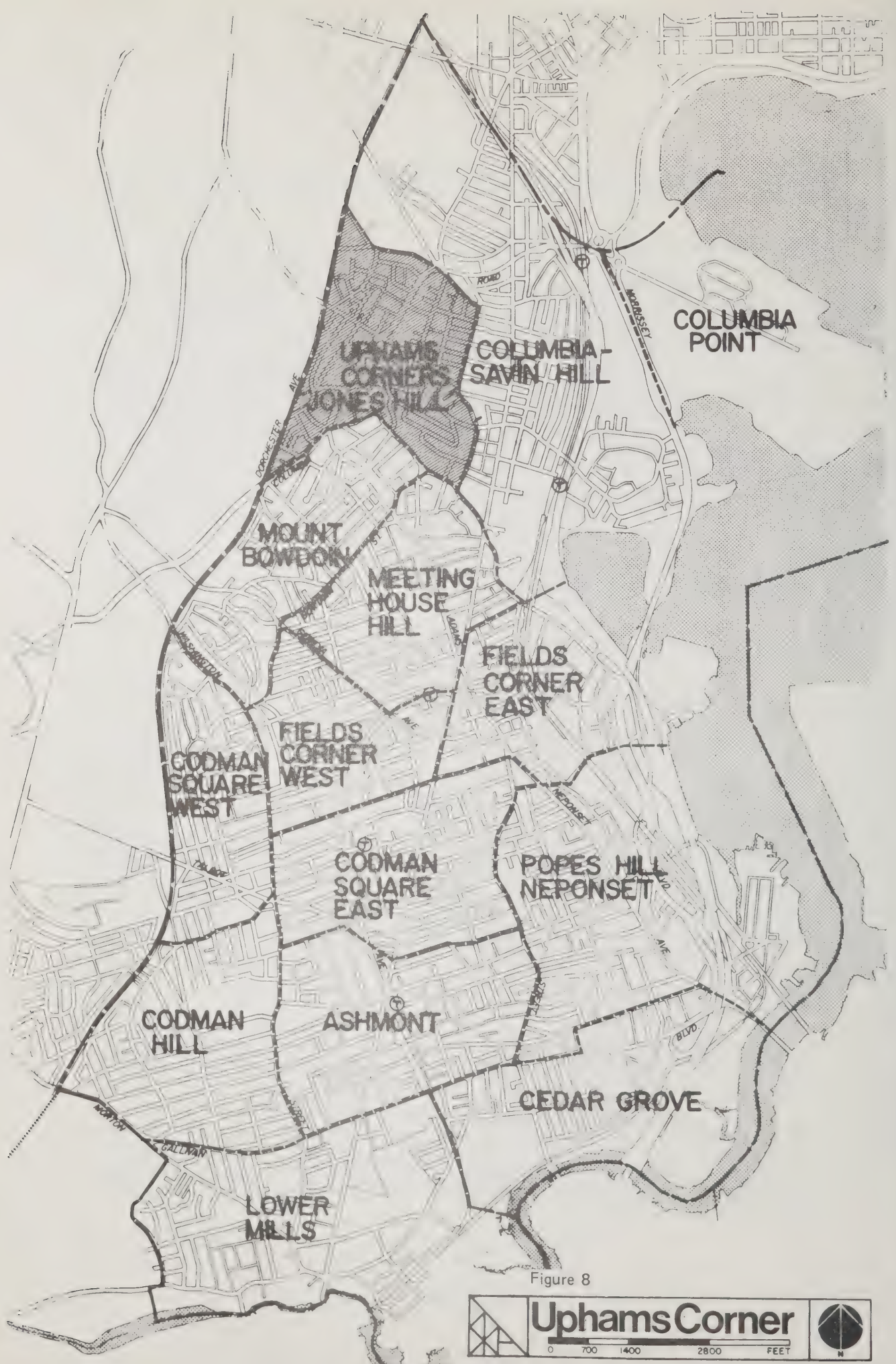
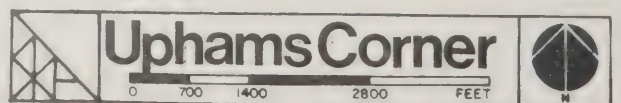


Figure 8



Upham's Corner-Jones Hill

The Upham's Corner-Jones Hill neighborhood bordered by Norfolk Avenue and Cottage Street to the north, Pleasant Street on the east, Columbia Road and Hancock Street to the south, and the Penn Central Railroad-Midland Division tracks on the west. This was one of the first neighborhoods in Dorchester to be exposed to a black population. By 1970, about 8 percent of the Upham's Corner-Jones Hill total population of 9,700 was black. Further, the Spanish-speaking population here numbered 6 percent, a high proportion given the city-wide average of 3 percent. Roughly 20 percent of the community's families subsist on below poverty level incomes, with median family earnings ranging from \$6,600 to \$10,000 per annum.

Despite a high percentage of absentee ownership and some building abandonment, the housing stock in this neighborhood has remained in fairly good condition. Several of Dorchester's most attractive residential streets can be found here.

Overall Area Characteristics

There are few overall social statistics available for the Upham's Corner area since it contains parts of neighborhood districts which are shared with Dorchester. However, the economic features of the area can be described generally. In recent years in Upham's Corner, residential disinvestment has occurred increasingly. It has become most apparent in the western Upham's Corner-Jones Hill and Columbia-Savin Hill neighborhoods. This results from reduction in ongoing maintenance and rehabilitation expenditures by owners and brings about rapid deterioration in the quality of the housing stock. Generally, a lack of confidence in the stability of the neighborhood contributes to the trend toward residential disinvestment.

Another issue of concern in the Upham's Corner area is commercial center decline and the associated decline of commercial uses along Columbia Road, Dorchester Avenue and Dudley Street. Commercial decline is similar to residential disinvestment in origin. Vandalism and poor security have resulted in boarded up stores and business failures in Upham's Corner neighborhoods.

Recent Public and Private Investment

From 1968 to 1974, public outlays from Upham's Corner were directed toward a high intensity lighting program, street improvements, and public works repair. New construction included the Quincy-Seanley Playground, and the Hernandez Elementary School. Housing programs which affected the district during this period included MFHA rehabilitation, FHA New housing code enforcement and rehabilitation, BHA leased housing, and the BBURG mortgage program.

Some private investment was likewise evidenced from 1968 through 1974. In particular, a substantial number of new commercial establishments appeared along Morrissey Boulevard. Renovation and new industrial development also occurred adjacent to Morrissey and Boston Road, and there were a few institutional renovations in Upham's Corner-Jones Hill neighborhood.

MATTAPAN: LITTLE CITY HALL AREA PROFILE

By 1970, about 20,600 people inhabited the Little City Hall area of Mattapan, which is wedged snugly between Dorchester and Hyde Park. The boundaries of the area encompass three neighborhoods -- Eastern and Western Mattapan, and Wellington Hill. The BRA planning district also includes a parcel of land to the northwest, which is the site of the Boston State Hospital (see Figure 8).

History of the Area

At the turn of the century, part of what was then "lower Dorchester" began to be developed as a residential area. Along Blue Hill Avenue, where the trolleys ran, one-, two-, and three-family structures were constructed. Irish and Jewish immigrants settled in the area, and it became relatively affluent. From the 1930's through the 1950's new homes were built on fairly large lots. Some small scale apartments were built later in the 1960's; large scale apartments, however, were never built in Mattapan. Today the housing stock remains a mix of small apartment houses and single-family homes.

Many of the residents who settled in Mattapan around 1910 were Jewish families displaced by a severe fire in Chelsea. The Wellington Hill area became known as "Jewish Mattapan." It was a major Jewish settlement in Boston proper and was, for the most part, a stable, white community.

Area Characteristics by Neighborhood

Our focus in this section shall be on Wellington Hill since most of the housing abandonment in the area has occurred in this neighborhood.

Wellington Hill

This neighborhood is bounded by Harvard Street on the northwest, Morton Street on the northeast, the Penn Central Railroad on the southeast, and Almont Street on the southwest. About 25 percent of the total population of Mattapan lived in this neighborhood according to the 1970 census. At that time, Wellington Hill was nearly 80 percent black and 20 percent white. The age structure of the population has changed since the 1960's; by 1970, children younger than 14 years of age totaled 30 percent of the population, an increase of 18 percent over the 1960 number. Conversely, the aged (those over 64) made up only 14 percent of the population, a decrease of 23 percent from the 1960 showing. These figures reflect the fact that Wellington Hill had been primarily the residence of older persons. The new residents

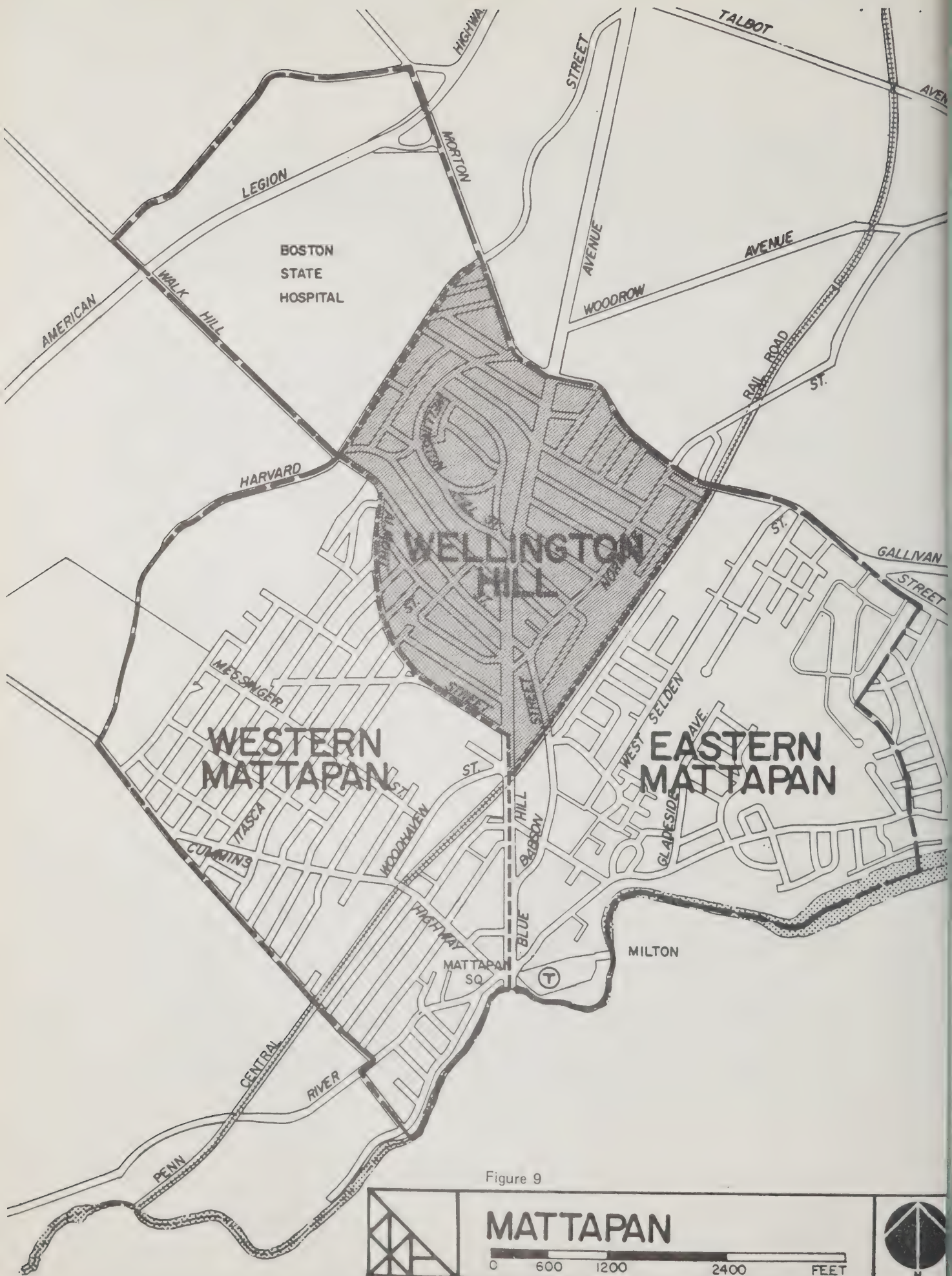


Figure 9

MATTAPAN

0 600 1200 2400 FEET

by 1970 appeared to have had larger sized families. Median income of the neighborhood was \$8,350, about \$1,000 lower than the median for Mattapan as a whole. Families earning less than \$5,000 a year composed 22 percent of the population, a proportion equal to the city-wide estimate in this category.

Housing abandonment which has become a serious issue in the Mattapan area (approximately 40 buildings in a state of deterioration have been taken over by the City for demolition and possibly another 40 abandoned properties are owned by HUD) is, by contrast, not so much of a problem in the Wellington Hill neighborhood. Most of the homes appear to be in very good condition, for the stable lower middle-class population here actively attempts to maintain real estate property.

There were some indications of commercial decline in the Wellington Hill district when the trolley lines were stopped, and the new commercial shopping centers began to attract patrons. However, the most important change affecting Mattapan occurred when the BBRUG mortgage program begun in 1962 was extended to include the Wellington Hill neighborhood (see discussion of BBRUG in Chapter II). Speculative transfer of properties in Wellington Hill occurred as single family homes were purchased at below market value and resold to black families. The Jewish neighborhood, remaining intact for a few months, made efforts to develop into an integrated community. A number of incidents at the local schools, however, led to teacher transfers, and the burning of a synagogue north of Mattapan in Franklin Field added to the climate of fear. In a few months time there was a rapid turnover in population. A measure of the extent of the change in the ethnic makeup of the neighborhood is the fact that in 1960 there were only four black persons residing in Wellington Hill; by 1970 there were over 4,000. During this period about 1,000 black persons also moved into the adjacent neighborhoods of East and West Mattapan. Sixty-eight percent of the residents had lived in their homes less than five years at the time of the 1970 census.

Overall Area Characteristics

The upper half of Blue Hill Avenue, which splits Mattapan, has suffered since racial conflicts led to rioting in the late 1960's. Shopkeepers lost confidence and moved away--or stayed, but did not modernize their stores. They have not been able to compete successfully with the attractions of suburban shopping centers.

By contrast, Mattapan Square, at the foot of Blue Hill Avenue and River Street, has received modest public expenditures (so far totaling \$250,000) for sidewalk improvements, lighting, off-street parking, and tree planting. This fact has spurred a mini-campaign to save Mattapan Square. The owners of commercial establishments have spent nearly \$4 million to modernize the Square. Vacancy rates are among the lowest in the City.

Recent Public and Private Investment

The 1975 investment program includes a new elementary school in western Mattapan and small expenditures to complete renovation of Mattapan Square. The remaining funds will go to install commercial street lighting on upper Blue Hill Avenue as part of a program to revitalize that area. In addition, approximately \$350,000 will be spent in HIP grants (for 300 homes), demolition and boarding of vacant buildings, restoration and sale of vacant lots.

With the exception of the money spent for the renovation of Mattapan Square, private investment has not been very strong, according to the sketchy figures given in the BRA Community Profile for Mattapan. Some scattered residential and commercial investment has taken place, but no major investments appear for the Wellington Hill area.

IV. PROBABLE IMPACTS ON THE PHYSICAL ENVIRONMENT AND MEASURES TO MINIMIZE HARM

This chapter identifies those impacts on the physical environment that could result from the CDBG demolition program and measures to be taken to avoid adverse impacts. The chapter is divided into sections on:

- land use
- transportation
- air quality
- solid waste
- noise
- utilities
- water quality
- public health and safety.

Each section discusses current environmental conditions, the potential effects of the demolition program, and the steps that the City of Boston and demolition contractors will take to minimize adverse effects, or the procedures to minimize harm. Explicit criteria are used to assess the environmental impact of each.

LAND USE

Current Conditions

An examination of current land uses and zoning controls is needed to determine the potential impact of the CDBG Clearance of Unsafe Buildings Program on the physical environment of these Boston communities. Approximately 79 percent of the total demolition impact area is classified by the Boston Redevelopment Authority as residential land; 9 percent as industrial or commercial; and the remaining 12 percent as institutional and park land (See Table 5).

Residential land typically is zoned for two and three family homes. Zoning classifications R-.5 and R-.8*, are predominant in the Little City Hall areas. In South Boston, Roxbury, and Mission Hill, however, apartments, zoned H-1, H-2, and H-3, are the common form of residences. H-1 zoning is also found in portions of Franklin Field, Dorchester, and Jamaica Plain -- often adjacent to major transportation arteries.

* The numeral in zoning classification refers to the maximum allowable floor area ratio, or FAR. For example, a zoning classification of R-.5 means the land is restricted to residential use and the square footage of the building may not be more than half (.5) the square footage of the lot.

Table 5

LAND USE BY DEMOLITION IMPACT AREA			
	Percent of Residential Land Area	Percent of Commercial and Industrial Land Area	Percent of "Other"* Land Area
<u>Upham's Corner</u>			
● Upham's Corner- Jones Hill	79.63	6.41	13.96
<u>Dorchester</u>			
● Mt. Bowdoin	78.55	11.01	10.44
● Codman Square West	90.08	4.58	5.34
● Codman Hill	97.56	0	2.44
● Meeting House Hill	81.79	5.25	12.96
● Fields Corner West	89.03	4.08	6.89
<u>Franklin Field</u>			
● Woodrow Morton	84.96	15.04	0
● Franklin Field South	56.39	9.35	34.26
● Franklin Hill-Harvard	81.42	8.70	9.88
● Columbia-Blue Hill	95.91	4.09	0
<u>South Boston</u>			
● City Point	53.09	3.79	43.12
● West Broadway	81.07	14.20	4.73
<u>Mattapan</u>			
● Wellington Hill	83.43	3.65	12.95
<u>Roxbury</u>			
● Area "A"	67.71	26.68	5.61
● Area "B"	76.26	7.31	16.43
● Area "C"	74.89	19.03	6.08
● Area "D"	86.80	13.20	0
● Washington Park	84.92	11.06	4.02
<u>Jamaica Plain</u>			
● Hyde Square	58.82	6.48	34.70
● Jamaica Central	91.50	5.10	3.40
● Egleston Square	90.15	4.92	4.93
● Stoneybrook	63.41	32.68	3.91
● Back of the Hill	77.33	1.33	21.34
● Mission Hill Proper	80.42	3.33	16.25
● Mission Hill Project	71.11	17.78	11.11
● Roxbury Tenants of Harvard	74.36	1.28	24.36
TOTAL IMPACT AREA	<u>78.87</u>	<u>9.24</u>	<u>11.89</u>

* Including Institutional and Park Land

Source: The Boston Urban Observatory: Substandard Housing and the Cost of Providing Housing: Related Services, 1973. Calculations by R.P.A.

Commercial districts, consisting primarily of local retail and service stores (zoned L-.5 and L-1), are distributed uniformly throughout the impact area. Retail business and/or offices (B-1 and B-2) are occasionally present in the more intensively developed neighborhoods of Codman Square West, Upham's Corner-Jones Hill, Meeting House Hill, Egleston Square, and Jamaica Central, along with the districts of Roxbury and South Boston. Industrial land use is limited to light manufacturing, specifically M-1 and M-2; although I-2, or general manufacturing, sectors appear in Franklin Field South, Codman Square West, and Roxbury's area "C".

Institutional and park land, designated as "other" land in Table 5, is comprised of small community open spaces, playgrounds, schools, libraries, churches, medical and similar facilities. More substantial park and institutional lands, such as Franklin Field and Franklin Park in Franklin Field, Marine Park and Castle Island in South Boston, and Arnold Arboretum, Olmstead Park, and the Veterans Administration Hospital in Jamaica Plain, also contribute to the land use pattern of the impact area overall.

Impact of the Project on the Environment

Criteria for Assessment

The land impacts associated with the CDBG demolition program are assessed in terms of potential changes in the density and use of land, which may occur as a direct result of the program.

Impact Assessment

Building Density. Table 6 illustrates the impact of the demolition program on the density of the affected neighborhoods. Assuming an average lot size of 3000 square feet, the total land area vacated by the program would be .096 square miles, or 6.144 acres -- 1.11 percent of all land in the impact zone. Mattapan will have the largest proportion of new vacant land -- an additional 2.36 percent of the residential sector and 1.96 percent of the total land area. However, when compared with the total land area, the additional amount of land vacated by the demolition program is relatively small overall.

Land Use. As important as the decrease in building density is the possible future use of the vacant land as open space or for redevelopment. The following section discusses potential programs and uses of both small and large city-owned parcels.

Small land parcels (those less than 5000 square feet) which are owned by the City are eligible for the REVIVAL program. Part of the

Table 6

IMPACT OF CDBG DEMOLITION PROGRAM ON LAND AREA

Little City Hall District	Number of Abandoned Bldgs. To Be Demolished		Land Area Vacated By Demolition (sq. mi.)		Existing Land Area (sq. mi.) of Impact Zone Within L.C.H. Area		Percent of Land Vacated By Demolition Program			
	1975-1976 Phase II	1976-1977 Phase III	1975-1976 Phase II	1976-1977 Phase III	Residential	Total	Residential		Total	
							1975-76	1976-77	1975-76	1976-77
Upham's Corner	40	20	.004	.002	.348	.437	1.15	0.57	0.92	0.4
Dorchester	-	80	-	.009	.938	1.283	-	0.96	-	0.7
Franklin Field	-	50	-	.005	.664	.878	-	0.75	-	0.5
South Boston	40	20	.004	.002	.635	1.029	0.63	0.71	0.39	0.1
Mattapan	40	30	.004	.003	.297	.356	1.35	1.10	1.12	0.8
Roxbury	220	220	.024	.024	2,190	2.786	1.10	1.10	0.86	0.8
Jamaica Plain	60	80	.006	.009	1.337	1.746	0.45	0.67	0.34	0.5
Total Impact Area	400	500	.042	.054	6.409	8.515	0.67	0.77	0.52	0.5

Source: Calculations by R.P.A. based on an estimated average lot size of 3,000 square feet and land area data extrapolated from the Boston Urban Conservatory report entitled, Substandard Housing and The Cost of Providing Housing-Related Services, 1973.

City's Neighborhood Improvement Program, REVIVAL is designed to encourage and assist homeowners in purchasing and revitalizing abutting vacant lots. REVIVAL landowners may not construct any structures on this property for a period of seven years. REVIVAL lots may be used as additional yards, open or gardening space by the purchaser. If purchase of these lots is not possible, abutters and community organizations may be eligible for a long-term lease of two to five years, or may obtain a permit from the City allowing use of the lot for an annual fee.

Community Development funds will be allocated under REVIVAL to expand the Parks and Recreation Department's Victory Garden program for those lots too large (over 5000 square feet) for an individual to use reasonably as a garden or yard. Neighborhood groups or organizations may apply for leases at their Little City Hall to develop new Victory Gardens on the vacant City-owned land. Under the terms of The lease, these groups would assume responsibility for managing and maintaining the property for the use and benefit of their members.

Unlike the smaller parcels, larger lots vacated by the demolition program, which are not leased for use as Victory Gardens, are potentially redevelopable by either public or private concerns. The majority of this land is zoned residential, and would be restricted to uses appropriate to residential areas unless exceptions were granted. However, as illustrated in the individual community profiles, there has been little reinvestment or new construction in these neighborhoods during recent years, primarily because of uncertainty over their future stability. It is, therefore, doubtful that any significant redevelopment would occur on these vacated parcels, particularly by private investors.

Measures to Minimize Harm

In order to avoid creating large, undevelopable parcels of land, the City will implement the following:

- An efficient boarding program will be carried out to arrest the rapid deterioration of abandoned structures in good and fair condition.
- The redevelopment potential for any large parcel that might result from demolition will be investigated through an active, promotional campaign.
- Buildings will be demolished according to Little City Hall priorities which will balance the desires of community residents for a safer environment against their desires to avoid large, undevelopable tracts of land.

TRANSPORTATION

This section identifies the transportation corridors in the city and in the impact area. Average daily traffic volumes and peak hour volumes are included for the major arteries in the impact area. Impacts from the demolition program are assessed in terms of the effects on traffic volumes and travel delays.

Current Conditions

The Boston Metropolitan area is served by a regional transportation network of radial highways and public transit systems extending outward from the central core. Routes 128 and 495 circumscribe the city, encompassing North Shore, Western, and South Shore suburban communities. From their perimeters extending inward to Boston proper, are several major highways, including Interstate-95/Route 1, Interstate-93, Route 2, the Massachusetts Turnpike, and the Southeast Expressway/Route 3. The Metropolitan Boston Transit Authority (MBTA) provides rapid mass transit on the "T" subway and trolley system to much of the metropolitan area.

Those major transportation arteries that lie within the delineated impact area include the Southeast Expressway, Dorchester Avenue, Blue Hill Avenue, Washington Street, Columbus Avenue, the American Legion Highway, and Centre Street, as illustrated in Figure 2. Table 7 presents both average daily and peak hour traffic volumes on these inner-city roadways. Early morning and late afternoon peak traffic flows are directed, respectively, toward and away from the Central Business District.

Most frequently, local congestion occurs on those arteries where vehicles are required to change lanes when entering or exiting the main stream of traffic, as at rotaries. Within the study area, the most critical congestion problem occurs at the Columbia Road/Mt. Vernon Street/Morrissey Boulevard rotary at Columbia Point caused by heavy traffic volumes from the adjoining Southeast Expressway, the University of Massachusetts Boston Campus, and local, residential, commercial, and industrial activities. Congested local, industrial and commercial traffic is also found at many of the neighborhood squares in the impact areas, where intersections are inadequate.

Impact of the Project on Environment

Potential impacts of the CDBG demolition program on the area's transportation systems are assessed in terms of changes in average daily and peak hour traffic volumes, delays in normally expected travel times, and the necessity of re-routing traffic.

Table 7

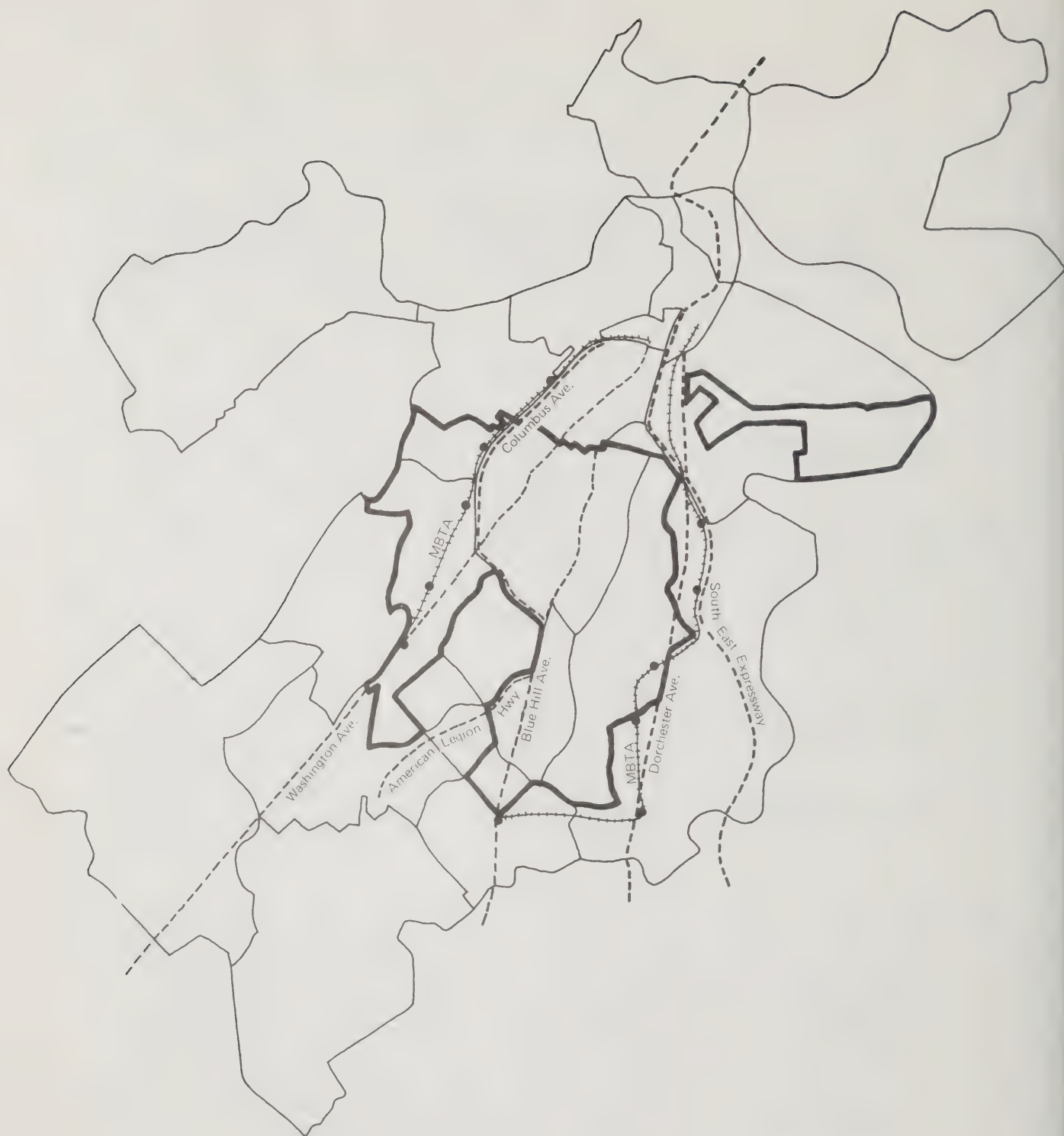
EXISTING AVERAGE DAILY AND PEAK HOUR TRAFFIC VOLUMES

ON MAJOR ARTERIES IN IMPACT AREA

<u>Street</u>	<u>Average Daily Volume</u>	<u>Peak Hour Volume*</u> <u>(7:30-8:30AM)</u> <u>and (4:30-5:30PM)</u>
Southeast Expressway	100,000	10,000
Dorchester Avenue	10,000	1,000
Blue Hill Avenue	37,000	3,700
Washington Street	10,000	1,000
American Legion Highway	15,000	1,500
Columbus Avenue	24,000	2,400
Centre Street	12,000	1,200

*Peak hour volumes are estimated as 10 percent of average daily traffic.

Source: Boston Redevelopment Authority, Transportation Division.



C.D.B.G. Demolition Program

Major Transportation Arteries
City of Boston

During the demolition of a typical three-story wood frame building, between 35 and 65* truck trips are made to the site to deliver equipment, remove debris, and deliver fill and ground cover. Since these truck trips are spread over 2 to 5 days, their impact on traffic volume is negligible.

However, local congestion and delay may occur during demolition when heavy equipment is being transported to and from a site, or when trucks are loading or unloading. As the workday schedule typically extends from 7:00 a.m. to 3:30 p.m., traffic congestion and delays could occur during the morning "rush hour". Heavy equipment can generally be stored on the sidewalk or the site, and hence not pose an obstacle to traffic. In addition, it is a common practice among wrecking contractors to "break" during rush hour, thus minimizing the interruption of local traffic.

Measures to Minimize Harm

Possible adverse impacts from local traffic will be avoided by timing the demolition program within each of the affected neighborhoods to avoid the simultaneous demolition of several buildings near to one another and warning the public with the use of street signs and a watchman.

- Since demolition contracts will be let to a single contractor for each neighborhood, only one building at a time will be razed in any neighborhood.
- Contractors will be requested to post traffic control signs within one block of the site to alert motorists of the roadway activities associated with the demolition.
- In accordance with Section 1305.4 of the 1975 State Building Code, a watchman will be employed to warn pedestrians of any imminent hazards from heavy equipment moving on or off the site.

*The number of trips varies extensively with the amount of fill needed and the size of the truck used to transport the fill.

AIR QUALITY

The demolition of residential buildings can create three types of emissions that affect the quality of the air:

- dust, or particulates, resulting from the demolition itself, loading the rubble into trucks, and grading the vacant site;
- vehicle emissions from heavy and light duty trucks, and
- a small quantity of hazardous asbestos from some types of boiler insulation.

Each of these three emissions is considered in detail below.

Fugitive Dust

Fugitive dust, or the dust released into the atmosphere during the demolition process, is the most significant air pollutant resulting from the demolition of residential buildings. It is also the most complex to analyze because there are little published data on typical dust emissions from residential building demolitions. Despite the overall lack of information on this subject, it has been possible with field measurements to estimate the amount of dust likely to be generated by the CDBG demolition project, the effects of this dust generation on ambient air quality, and the possible soiling and health effects of large quantities of dust particles.

The dust that would be generated by the demolition project is not specifically related to the measurements and standards of ambient air quality for suspended particulates. These standards pertain only to very small, respirable particulates (less than 10 microns) which comprise only a small percentage of the particulates that would be generated by the demolition. For these reasons, this air quality analysis is focused more on the soiling effects of dust than on the health effects of breathing respirable dust particulates.

Dust Generation

Given the lack of published data, it was necessary to measure emissions from demolition activities typical of the proposed project in order to develop accurate information for this EIS. Measurements were made for both wood frame and brick structures, with and without the use of dust control procedures. The results of these measurements are shown in Table 8 and expressed as pounds of dust per structure, pounds per day of demolition activity, and pounds per ton of demolition waste.

Table 8

ESTIMATES OF FUGITIVE DUST EMISSIONS
FROM THE DEMOLITION OF URBAN MULTI-FAMILY STRUCTURES

Effects of Dust Control Procedures During Demolition	Wood Frame Structures			Brick Structures		
	<u>lbs</u> day	<u>lbs</u> ton of waste	<u>lbs</u> structure	<u>lbs</u> day	<u>lbs</u> ton of waste	<u>lbs</u> structure
No Control	450	6	940	500	6.7	1040
Average Control	225	3	490	250	3.3	540
Extensive Control	90	1.2	220	88	1.2	216

The figures for the pounds of dust per structure were estimated from the measurements themselves. To calculate the pounds of dust generated per day, it has been assumed that an average of 2.5 days would be needed to accomplish all phases of the demolition; i.e., razing the building, loading the rubble onto trucks and removing it, and grading the site. In addition, it has been assumed that the demolition of a typical multi-family structure in the impact area produces an average of 150 tons of demolition waste. This value was used to compute the pounds of dust per ton of demolition waste. In general, razing and rubble removal have the greatest potential for producing fugitive dust; site grading accounts for substantially lower emissions.

Measurements were also made under varying control procedures as defined in Table 8. Dust control procedures refer to the use of a water spray to wet the structure during the course of demolition. Average control is considered to be intermittent wetting, with the most intense wetting occurring during the actual razing of the structure. A 50 percent reduction in the generation of dust is estimated to result from this practice. Continuous wetting throughout the demolition and rubble-removal processes constitutes extensive dust control. An 80 percent reduction in dust levels seems to be possible with this practice.

Were no dust control procedures used, a total of approximately 423 tons of dust would be generated over 2 years by the Clearance of Unsafe Buildings program (See Table 9). With average control (intermittent wetting) this figure drops to 281 tons, and with extensive control (continuous wetting) it falls even more significantly to 99 tons.

Table 9

TOTAL FUGITIVE DUST GENERATION UNDER THE
UNSAFE BUILDING CLEARANCE PROGRAM, AND
POTENTIAL FOR DUST REDUCTION
USING AVERAGE AND EXTENSIVE CONTROL PROCEDURES

Total Dust Generation With Different Levels of Control	Number of Structures Demolished		
	Phase II 400	Phase III 500	Total Project 900
No Control			
Total lbs. dust	376,000	470,000	846,000
Total tons dust	188	235	423
Average Control			
Total lbs. dust	196,000	245,000	441,000
Total tons dust	98	183	281
Extensive Control			
Total lbs. dust	88,000	110,000	198,000
Total tons dust	44	55	99

In order to understand the significance of the dust generated by demolition, it is important to consider two factors: the rate at which the dust is generated and the geographic dispersion of the dustfall. The influence of each of these factors on the environment is shown in Table 10 and discussed below.

Because the rate of particulate production is dependent on the demolition schedule followed during the project, alternative schedules (as shown in Table 10) were considered: the demolition of 400 structures over periods of 90 days and 180 days, the demolition of 500 structures over 360 days, and the demolition of 900 structures evenly over a two-year period. Obviously, and as shown in the table, the rate of dust generation drops in proportion to the rate of demolition.

Each of the demolition schedules was then evaluated in terms of the geographical distribution of the project area. The basis for evaluation was a factor described as "dust fall", which is expressed in terms of tons of particulate per square mile, per month. This factor indicates the soiling potential of dust in the atmosphere.

When the dustfall from this demolition project is compared with the estimated dustfall for the City of Boston of 45 tons per square mile per month, it is evident that the dust from the project would not have a significant city-wide soiling impact, as indicated in Table 10. The dust from demolition generally represents an increase of less than 1 percent over ambient conditions.

Ambient Concentrations of Demolition-Generated Particulates

An assessment was made of the impact on ambient air quality of dust generated by building demolition. High volume samples (samples based on large quantities of collected air) of ambient air were taken at sites adjacent to the residences nearest the demolition of both wood frame and brick structures under low wind conditions. The filters utilized for these measurements became saturated with dust particulates after sampling periods ranging from 10 minutes to 2 hours. Because of these heavy particulate concentrations, it was necessary to collect a number of short term samples rather than a single continuous sample. However, visual observations of the demolition process indicated that the activities associated with dust generation were carried on at a constant rate throughout the workday, and that the results of short-term sampling could be considered representative of the entire workday.

Summarized in Table 11 are the average ambient particulate levels found at residences located within 10 to 50 feet of the demolition sites. The sample data suggest that an envelope of air with high particulate loadings surrounds the demolition site, extending outward to the nearest structures. The highest particulate concentrations are found directly downwind of the demolition site, with lower concentrations upwind and at

Table 10

INFLUENCE OF CDBG DEMOLITION SCHEDULES ON
DUSTFALL VALUES IN THE CITY OF BOSTON

Demolition Schedules	Rate of Dust Generation lbs./working day	Dustfall Potential tons/sq.mile/ month	Increase in Dustfall Relative To Boston Average Percentage
<u>400 Structures in 90 Days</u>			
No Control	4178	1.06	2.4
Average Control	2178	0.55	1.2
Extensive Control	978	0.25	0.6
<u>400 Structures in 180 Days</u>			
No Control	2089	0.53	1.2
Average Control	1089	0.28	0.6
Extensive Control	489	0.13	0.3
<u>500 Structures in 300 Days</u>			
No Control	1570	0.44	1.0
Average Control	818	0.34	0.8
Extensive Control	367	0.10	0.2
<u>900 Structures in 600 Days</u>			
No Control	1410	0.40	0.9
Average Control	735	0.26	0.6
Extensive Control	330	0.09	0.2

Table 11

TOTAL DUST CONCENTRATIONS
MEASURED AT NEAREST RESIDENCES DURING
BUILDING DEMOLITIONS TYPICAL OF THE
CDBG DEMOLITION PROGRAM

Sampling Location	Total Suspended Particulates (TSP) $\mu\text{g}/\text{M}^3$	Projected 24 Hour Average (TSP) $\mu\text{g}/\text{M}^3$
Downwind of Wood Frame Structure*	33,644	11,280
Upwind of Wood Frame Structure*	11,006	3,735
Downwind of Brick Structure**	4,100	1,433
Upwind of Brick Structure**	1,200	466
During Site Grading*	1,783	661

* No Dust Control

** Continuous Wetting

a greater distance from the demolition activity. These results indicate that the heaviest dust particles settle to the ground shortly after they leave the site or at least by the time they hit a barrier, such as another building.

When related to the 24 hour ambient air quality standards for suspended particulates (i.e., 150 micrograms per cubic meter) the values measured in this study are extremely high. However, as indicated earlier, this comparison is not valid because the sampling procedure used to collect ambient particulate data effectively prevents significant numbers of particles greater than 10 microns from being collected. These samples, on the other hand, were taken with the objective of collecting particles of all sizes; hence the particulate levels appear to be more significant than they actually are when compared to Federal standards.

Particle Size

In order to evaluate the potential health effects of the dust particles from demolition, a microscopic analysis of particle size was conducted. Measurement of the particles and an analysis of the results indicated that the geometric mean diameter of demolition particles from a wood frame building is 18 microns, or well above the 10 micron size that is respirable. The standard deviation is small, 2.09, indicating that there are very few particles which could have an impact on human health. In fact, 90 percent of the particles were found to be larger than 10 microns in diameter.

This analysis indicates further that at least 90 percent of the demolition-generated particulates will settle to the ground in the immediate vicinity of the demolition site and will not be dispersed into the atmosphere. Generally, the buildings scheduled for demolition under the project are close to other buildings. Particles greater than 10 microns in diameter which do not remain in the air for great distances will, therefore, tend to collect on their surfaces. Thus the greatest impact of demolition on air quality is likely to be the soiling of the exterior surfaces of buildings adjacent to the demolition sites.

Finally, the potential for substantial quantities of dust penetrating the indoor atmosphere is considerably less than the potential for exterior soiling. Although 96% of particulates suspended outdoors typically penetrate indoors, the large particles generated by demolition would not penetrate surrounding buildings as easily, if at all, as would particles typically less than 10 microns in diameter.

Pollution Associated with Demolition Vehicles

Vehicular traffic associated with building demolition is comprised of heavy duty, diesel powered trucks (20-60 cubic yard capacity) used to haul rubble, and smaller (6-12 cubic yard capacity) gasoline or diesel

powered trucks used to bring in fill for grading. Typically, 6-20 trucks are used to remove rubble and 20 to 40 for land infill. Five additional light duty trucks are involved in miscellaneous activities.

An estimate of the potential emissions from these vehicles is presented in Table 12. The values in this table are derived from the following assumptions:

- The neighborhood immediate to the demolition site is the major area of concern.
- Truck emissions affect a one-tenth mile stretch of roadway leading to the demolition site.
- Trucks do not idle while preparing for loading or dumping.
- All hauling occurs during one day, i.e., 31 to 65 trucks in 8 hours or 3.9 to 8.1 trucks per hour.

The maximum amount of carbon monoxide generated per work day by the trucks (approximately 432 grams) is equivalent to the emissions from 88 cars per workday (11 per hour). The impact on neighborhood residents of this quantity of carbon monoxide is insignificant. The amount of nitrogen oxides generated per day (approximately 110 grams) by demolition related vehicles is equivalent to the emissions from 244 cars (31 per hour) -- again an insignificant impact. Hydrocarbon and particulate emissions are each equivalent to the emissions from 128 (16 cars per hour) and also have an insignificant impact.

Asbestos

Asbestos may possibly be present in a friable, or free-floating state in some of the buildings planned for demolition. This material is typically found as boiler insulation in commercial buildings, but could be present in some of the larger apartment buildings if they contain commercial-type boilers for heating. Since asbestos has been found to be extremely dangerous to health, even in small quantities, precautions for preventing its release into the ambient air are written into Federal law. Even stricter standards for handling this material are likely to be promulgated by the Federal government prior to the beginning of any actual demolition under this project. Strict enforcement of these standards will ensure that this dangerous material will not be released into the air in significant quantities. Approximately 20 of the structures currently scheduled for demolition have asbestos shingle siding. The asbestos contained in these materials is not friable and hence will not constitute a hazard.

Measures to Minimize Harm

The overall impact of demolition practice on air quality is not adverse. However, the area in the immediate vicinity of the demolition site would be subject to short-term problems of heavy soiling on

Table 12

VEHICULAR RELATED POLLUTANT PRODUCTION ASSOCIATED
WITH DEMOLITION PROCEDURES - HAULING AND FILL

Pollutant:	Range* of Potential Production - Combined Contributions From Diesel and Gasoline Vehicles				
	<u>grams</u> day	<u>lbs.</u> day	<u>lbs.</u> 400 structures	<u>lbs.</u> 500 structures	<u>lbs.</u> 900 structures
Particulates	3.55 to 6.20	0.008 to 0.014	2.3 to 5.6	4.0 to 7.0	7.2 to 12.6
Carbon Monoxide	59.1 to 432.3	0.130 to 0.950	52.0 to 380.0	65.0 to 475.0	117.0 to 889.2
Hydrucarbons	17.3 to 83.3	0.038 to 0.183	15.2 to 73.2	19.1 to 91.5	34.3 to 164.7
Oxides of Nitrogen	93.1 to 110.3	0.205 to 0.243	82.0 to 97.2	102.5 to 121.5	184.5 to 218.7

* The lower value of each range represents the combined contribution of 26 diesel and 5 gasoline powered vehicles

The upper value of each range represents the combined contribution of 20 diesel and 45 gasoline powered vehicles.

exterior surfaces. Substantial reductions in this localized impact can be realized through extensive wetting during the demolition process. Measurements made for the preparation of this report indicate that the particulate generation potential can be reduced by 80 percent if continuous wetting is employed during the demolition. The particulates produced by demolition do not constitute a serious health hazard since 90 percent are larger than 10 microns and hence not respirable.

The air pollution potential from vehicles associated with the demolition process is insignificant with respect to their contributions to existing pollution levels; since the number of additional vehicles is miniscule.

Asbestos may be present in a friable state in a few of the buildings scheduled for demolition. Precautions to be taken against asbestos dust are required by Federal law and will be enforced.

Adherence to the following procedures will insure that any impact of demolition procedures on air quality will be minimal:

- Extensive dust control prevention will be practiced, principally by wetting down the site continuously during demolition and rubble removal. This practice, which can reduce dust by 80 percent will be adhered to at all times.
- Demolition schedules will be spaced in both time and location; rather than concentrating them in one neighborhood at a given time.
- All buildings scheduled for demolition will be examined by Building Department personnel for the presence of material which could produce friable asbestos. If the potential for the release of friable asbestos exists, the demolition will be monitored by a building inspector to insure that the appropriate precautions are taken by the demolition contractor.

SOLID WASTE

Current Conditions

Municipal Waste Disposal

The City of Boston currently collects 1,200 tons of municipal waste per day, or almost 300,000 tons per year. Until August 11, 1975, municipal waste was incinerated at the Boston municipal incinerator at 70 South Bay Street and the ash disposed of at the municipal sanitary landfill at 200 Gardener Street in West Roxbury. Some wastes were landfilled without incineration.

On August 11, 1975, the Boston municipal incinerator was closed for violations of particulate emission standards under Massachusetts Bureau of Air Quality Control Regulation 2.5.3. No plans exist at this time to renovate the incinerator, and all of Boston's municipal waste is now being taken to the Gardener Street sanitary landfill. Projected from these conditions, it is estimated that the capacity of the Gardener Street sanitary landfill will be exhausted late in 1977.

The Boston Department of Public Works is currently preparing a request, for proposals from private contractors for disposal services that would dispose of the waste outside city limits. Potential bidders would be the owners of sanitary landfill sites or incinerators.

Demolition Waste Disposal

Demolition wastes generated within the City of Boston are disposed of in sanitary landfills or open dumps outside the City. Most municipalities in Massachusetts prohibit dumping wastes that originate outside their boundaries. Therefore, demolition wastes are usually disposed of at private landfills or transported illegally to New Hampshire, where they are either landfilled or burned.*

Historically, demolition wastes have also been barged out into the ocean and burned. In 1972, the Massachusetts Bureau of Air Quality Control prohibited open burning within the Commonwealth, including its waters which extend 37 miles out to sea from Boston. This regulation made ocean burning economically unattractive (and often physically infeasible in rough seas), and was discontinued.

The disposal method actually used at any given time depends on temporary economic conditions, such as transportation costs to the site and tipping (dumping) fees. Today, tipping costs range from \$20 to \$100

* In New England, only the State of Connecticut permits solid waste to be brought into the state for disposal purposes. All other New England states refuse solid wastes except for recycling purposes.

for a typical truckload of demolition waste. Tipping fees are higher at approved sanitary landfills than at unapproved ones. Transportation costs range from \$1.00 to \$1.25 per mile for a truck having a capacity of 50 to 60 cubic yards. Because wastes disposal is a major problem for wreckers, disposal costs range between 30 percent and 70 percent a typical demolition contract.

Sanitary Landfills

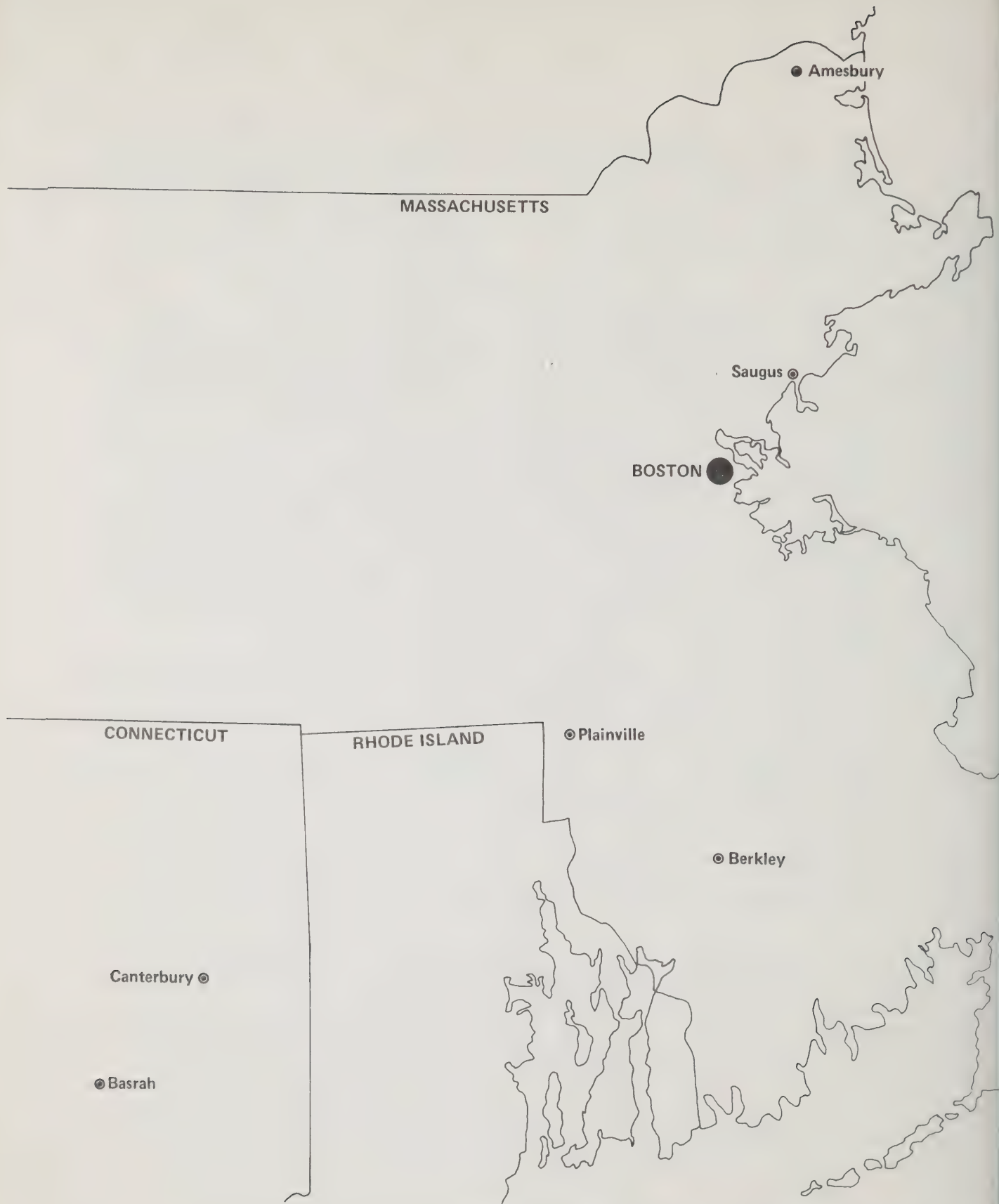
The Massachusetts Department of Public Health (DPH) regulates and approves sanitary landfills. Section 105A of Chapter 111 of the General Laws, as amended, stipulates that a sanitary landfill "shall not be constructed or operated unless the proposed use and the plans or design therefore have been approved by the Department." Sanitary landfills are to be operated in a manner that "will protect the public health, comfort and convenience and prevent a nuisance or a danger to the public health by reason of odor, dust, fires, smoke, the breeding or harboring of rodents, flies, or vermin, or other causes." It is the responsibility of the landfill operator to obtain approval for his landfill from the DPH; and the DPH is now in the process of closing down landfills which are not participating in the plan approval process.

The Boston area presently faces an acute shortage of sanitary landfill capacity for both municipal and demolition wastes. Table 13 lists the location of landfill sites and indicates their status with respect to state approval. Approved sites are shown on Figure 11. As of mid-September 1975, there were only four privately owned, state approved sanitary landfills that might accept Boston's demolition wastes.

Criteria for Assessment

Solid waste assessment criteria include:

- a comparison of the CDBG demolition program's solid waste loadings with demolition activity loadings generated by regular Boston Building Department activities.
- the impact of the program's solid wastes on available sanitary landfill capacity.
- the extent to which this program's solid waste may be recycled.



C.D.B.G. Demolition Program

Sanitary Land Fill Site
City of Boston

Fig

Table 13

PARTIAL INVENTORY OF LANDFILL SITES AS OF SEPTEMBER 1975

State Approved

Amesbury, Titcomb Site, Hunt Rd. and Rt. 150
Amesbury, Main Sites, Hunt Rd.*
Berkley, County Rd.
Plainville, Rts. 1 and 495**

Participating in Approval Process, But Not Approved

Quincy, Badger Quarry, Ricciuti Drive
Amesbury, Rts. 150 and 95
Randolph, Johnson Drive

Not Participating in Approval Process

Duxbury, Mayflower Rd.***
Dartmouth, Old Fall River Rd.
Walpole, Rt. 1A
Saugus, Rt. 107
Billerica, Pond St.
Tyngsboro, Dunstable and Cummings Rd.
Peabody, Dearborne Rd.
Middleton

Connecticut Sites

Basrah, Seymour's Sand and Stone
Canterbury, James Yaworski

NOTES: * Limited to 90 trucks per week by town of Amesbury

** Limited to 750 tons per day

*** Under state orders to close

Impact of the Project on the Environment

Under the Clearance of Unsafe Buildings program a total of 900 buildings would be demolished. As indicated in Chapter II, approximately 62 percent, or 561 buildings, are either wood frame or asbestos-shingled wood frame, and 38 percent, or 339 buildings are brick or masonry. On the average there are 2.5 dwelling units per building, or 2,250 dwelling units in total.

Estimation of Solid Waste Loads

From a survey made of six demolition contractors, estimates were obtained for the number of truckloads of rubble generated by the demolition of a typical three-family house. Estimates ranged from 6 to 20, depending on the size and construction of the house and the size of the truck. Additional probing yielded the following estimates of demolition waste volumes for a typical wood-frame house.

Table 14

TYPICAL DEMOLITION WASTE VOLUMES

<u>Size of House</u>	<u>Size of Truck</u>	<u>Number of Truckloads</u>
1-family	60 cu. yd.	5-6
2-family	60 cu. yd.	9-10
3-family	60 cu. yd.	12-13
2-family	40-50 cu. yd.	12
3-family	40-50 cu. yd.	13

Of the 12 to 13 truckloads of waste generated by a three-family structure, some 7 to 8 truckloads would consist mainly of wood, and 4 to 5 would consist of mixed wood, masonry, concrete from foundations, and brick from chimneys. A typical 60 cubic yard truckload of wood weighs approximately 10 tons; a truckload of mixed wood and masonry weighs an average of 17.5 tons.

Using these data, and assuming that the volume of demolition waste from brick buildings is equivalent to that from wood structures*, the

* Chatterjee, S., Urban, L.V., and Mikucki, W., "Planning Suffers from Lack of Building and Demolition Debris Data," Solid Waste Management, February 1975, p. 12.

volume of waste from the 900 houses to be razed under the Clearance of Unsafe Buildings program is calculated to be 562,500 cubic yards (See Appendix A for calculations.) This volume averages out to 250 cubic yards per dwelling unit. Considering the number of brick and wood frame buildings to be demolished and the densities of brick and wood debris, the average density of a cubic yard of demolition waste from this program would be .24 tons or 480 pounds. Given that there would be 562,500 cubic yards of waste generated by the project at an average density of .24 tons per cubic yard, the total waste mass is 135,000 tons, or 60 tons per dwelling unit. The figure of 60 tons of demolition waste per dwelling unit is consistent with the national average*. Ordinarily, about 67,000 tons of demolition waste per year are generated by the regular activities of the Boston Building Department.

If the Clearance of Unsafe Buildings project were spread evenly over a two-year period, the waste load would be 281 tons per workday. About 20 trucks per workday would be needed to haul the debris away from the city to a disposal site.

Composition of the Demolition Waste

The solid waste materials generated by the proposed demolition project would be primarily wood, concrete, and brick. Unfortunately, many of the abandoned houses in the project have been vandalized and stripped of potentially recyclable materials. The composition of recent Boston residential and nonresidential demolition waste is shown in Table 15. Of the total residential and nonresidential takedowns shown, only 1.5 percent of the waste materials generated were composed of steel, copper, lead, or glass. Assuming that these percentages are applicable to the proposed demolition project, an estimated 67,500 tons of wood, 47,000 tons of concrete and 18,100 tons of brick would be generated.

Disposal of the Demolition Waste

If one assumes that a truck yard of demolition waste is approximately equal to a landfill yard of demolition waste, and that all the waste from the proposed demolition project were landfilled, approximately 562,500 cubic yards of landfill capacity would be needed. Collectively, the four state-approved landfill sites that accept demolition waste have more than enough capacity to accept the demolition waste for the entire project. However, certain landfills have usage constraints, such as a limit on the number of truckloads that can be accepted per week. (See notes to Table 13.) These constraints could limit the rate at which the buildings come down. (See Chapter VI, Impact of the Environment on the Project.)

* Ibid.

Table 15

MATERIAL COMPOSITION OF DEMOLITION WASTES IN BOSTON
1969 - 1972

	<u>SHORT TONS</u>	<u>PERCENT BY WEIGHT</u>
Steel		
Residential	214	.32
Nonresidential	228	.34
Copper	9	.01
Lead	25	.04
Brick	9,011	13.47
Concrete	23,338	34.88
Wood		
Residential	33,524	50.11
Nonresidential	470	.70
Glass	87	.13

SOURCE: Weisman, R.M., "An Investigation of the Potential for Resource Recovery from Demolition Wastes," to be published. (AEN 75-14197), Department of Mechanical Engineering, MIT, sponsored by the National Science Foundation.

Based on yearly averages for 624 average annual takedowns, 455 residential and 169 nonresidential, 1969-1972.

Measures to Minimize Harm

Use of State-Approved Facilities

To minimize any adverse effects from the disposal of solid waste, the City of Boston will require that the demolition contractors dispose of the demolition debris in facilities approved by the Commonwealth of Massachusetts. As of mid-September 1975, these include four sanitary landfill sites. By March 1976, when the demolition contracts are signed, there are expected to be more approved landfill sites and at least one approved incinerator at Saugus, operated by Refuse Energy System Co. (RESCO). This requirement will be implemented through the notarized affidavit presently required of demolition contractors which specifies where the waste is being disposed.

A contractual requirement to use an approved sanitary landfill or incinerator will raise the cost of waste disposal from approximately \$400 to \$800 for a typical three-story wood frame building.

Compaction

Because the costs of sanitary landfill disposal are anticipated to increase, the City of Boston will encourage the practice of on-site compaction. This will prolong the availability of landfill capacity and ease handling, and prolong lifetimes of landfill compaction equipment.

Recycling

The City of Boston will also encourage demolition contractors, through the contract specifications, to recycle as much of the demolition waste as is economically feasible.

A survey of five Boston demolition contractors indicated that three of them recycle used brick. Generally, only portions, such as the facades, of brick and wooden buildings contain high quality hard brick. After a demolition only about 50 percent of this hard brick remains in complete pieces that can be cleaned and resold. A good market exists for used brick in the Boston area. Two of the demolition contractors surveyed also attempt to salvage some metals and heavy timbers. There is also a large market for metals (copper, brass, steel, iron), when they can be salvaged. In the Boston area, in mid-1974, steel was worth \$80-\$100 per ton, copper \$1 per pound, and bricks \$.05 - \$.08 each.

Incinerator and Steam Recovery

In Saugus, the first unit of a private two-unit incinerator-steam plant with a capacity of 1200 tons per day is scheduled to open in October 1975. This incinerator, owned by Refuse Energy System Co. (RESCO), also has shredding facilities. If capacity is sufficient, a portion of the organic waste (wood and plaster with a small amount of inerts) could be shredded and burned. Use of the RESCO incinerator would be advantageous for several reasons: (1) transportation costs would be low; (2) the heat value of the organic waste would be used to generate steam; and (3) the volume of solid waste would be reduced to one-tenth original volume, thus saving landfill capacity. Air and water pollution are stringently controlled at the incinerator.

Conservative estimates show that a pound of organic demolition waste contains 3,000 Btu of energy. If half of the 135,000 tons of demolition waste were combustible (67,500 tons), then the energy value of the waste would be 4×10^{11} Btu or the equivalent of 70,000 barrels of crude oil.

NOISE IMPACTS

The extent to which noise resulting from the CDBG demolition project would affect the environment, and whether or not the project would comply with noise level standards set by government agencies are discussed in this section.

In order to make this evaluation, it is necessary to understand the means by which noise is measured. Important characteristics of environmental noise which are used to assess their effects are (1) the intensity of the sound, (2) the frequency of the sound, and (3) the time-varying character of the sound.

Sound intensity is dependent upon the strength of pressure fluctuations around a static pressure and is measured on a logarithmic scale in units of decibels (dB). The logarithmic scale implies, for example, that a doubling of sound intensity corresponds to an increase of 3 dB, and a ten-fold sound intensity increase corresponds to an increase of 10 dB. However, to the average person, each increase of 10 dB will "sound" approximately twice as loud to the ear.

Sound frequency is a measure of the rate of repetitive pressure fluctuations and can be thought of in terms of the "pitch" of a sound. Because most individuals find high frequency (or pitch) sounds somewhat more irritating than low frequency sounds, an "A" weighted sound level scale is used to simulate how an average person responds to sounds of different frequencies.

Because instantaneous sound levels in any environment are generally not constant but change continually within any given period of time, it is also necessary to account for the time-varying characteristics of sound. Statistical approaches are generally used in order to give a more precise definition of this aspect of a particular noise environment.

The $L_{10}dB(A)$ noise level is the sound level in dB(A) that is exceeded 10 percent of the time. Stated differently, for every ten noise measurements made, the highest reading is equal to or greater than the L_{10} value. The L_{50} value is the noise level which would be exceeded 50 percent of the time. An approximate formula which relates L_{eq} to L_{10} is: $L_{eq} = L_{50} + (L_{10} - L_{90})^2 / 60$. The $L_{eq}(24)dB(A)$ noise level is an 'energy averaged' sound level for a 24-hour period.

Current Conditions

To determine typical ambient noise at proposed demolition sites when no demolition activities are taking place, ambient noise levels were

measured at several actual demolition sites chosen to represent both quiet and busy streets. The noise measurement procedure is discussed in Appendix B ; results of the measurements are presented in Table 16. The major sources of noise observed during the measurements of ambient site conditions were nearby voices, vehicular traffic and horns, and overhead airplanes.

The measurements indicate that ambient conditions at demolition sites range between 61 to 77 L_{10} dB(A) or 57 to 74 L_{eq} dB(A). Additional data compiled by the Boston Air and Noise Pollution Control Commission shows that ambient conditions in Boston can range from 47 to 75 $L_{eq}(24)$ dB(A) or from 42 to 82 L_{10} dB(A).

Impact of the Project on the Environment

Criteria for Assessment

The criteria for assessing the impact of noise are:

- The extent to which noise levels from demolition will affect the health of neighborhood residents and workmen.
- Whether or not the project will comply with noise level standards set by City, State, and Federal Agencies.

Health Effects. The impact of noise on people is evaluated primarily in terms of three direct effects and four indirect consequences. The three major effects are hearing damage, speech interference, and sleep interference. The indirect consequences are physiological stress, annoyance, startle and task interference.* The noise levels at which these impacts generally occur are shown in Table 17.

City Noise Regulations. The Boston Air and Noise Pollution Control Commission has adopted a stringent set of noise regulations.** Regulation 4 restrictions on noise from construction and demolition sites, pertains to this project. This regulation stipulates that, as of June 1, 1975, noise emitted from a construction site in a residential area shall not have an L_{10} level measured at a distance of 50 feet in excess of 80 dB(A); and as of June 1, 1976, shall not have an L_{10} level at a distance of 50 feet in excess of 75 dB(A). In addition, as of

* Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances, NTID 300.1, December 31, 1971.

** Regulations for the control of noise in the City of Boston

June 1, 1975, the maximum noise level emitted from such projects may not exceed 86 dB(A). These regulations are independent of time of day, day of the week, ambient pressure, and humidity. The City of Boston also places restrictions on noise emitted from new motor vehicles and new outdoor powered equipment, other than pile drivers. Regulations 5 and 6 restrict the sale and lease in the City of Boston of new motor vehicles and outdoor powered equipment that produce noise in excess of established limitations.

State Noise Regulations. Department of Public Health, Division of Environmental Health, Bureau of Air Quality Control regulates noise pollution* for the Commonwealth of Massachusetts. Regulation 10 stipulates that no person may emit sounds that may cause a nuisance, be injurious, or interfere with "the comfortable enjoyment of life and property in the conduct of business."

Federal Noise Regulations. The U.S. Environmental Protection Agency (EPA) under the Federal Noise Control Act of 1972 regulates interstate motor carrier noise emissions.** As of October 15, 1975, trucks engaged in interstate commerce that have a GVWR or GCWR (Gross Vehicle Weight Rating or Gross Combination Weight Rating) of more than 10,000 lbs must not exceed the following permissible exterior noise levels: 88 dB(A) at 50 feet under stationary run-up, 86 dB(A) at 50 feet for speeds under 35 mph, and 90 dB(A) at 50 feet for speeds over 35 mph. However, as they are interstate, these regulations would seem not to apply to trucks operating only within Massachusetts.

HUD policy and criteria*** were established to determine acceptable acoustic environments for Federally-assisted residential dwelling units; however, these criteria are not applicable to this project because no redevelopment is involved.

* Regulations as amended for the control of air pollution in the Metropolitan Boston Air Pollution Control District.

** Federal Register, Vol. 39, No. 209, pg. 38215.

*** Noise Abatement and Control: Department Policy, Implementation Responsibilities, and Standards, Policy Circular No. 1390.2, August 4, 1971.

Table 16

AMBIENT AND DEMOLITION NOISE LEVELS

SITE ADDRESS	STREET TYPE	NEIGHBORHOOD TYPE	BUILDING TYPE	MAJOR NOISE SOURCES	L ₁₀ dB(A) *		L _{eq} dB(A)	
					AMBIENT	DEMOLITION	AMBIENT	DEMOLITION
1. 276 Geneva Ave. Dorchester	Major street	Residential	Wood 3-family house	Small bulldozer 450 Case	73 ⁺² -3	83 ⁺² -0	69	82
2. 130 Hamilton St. Dorchester	Minor street	Residential	Wood 3-family house	Crane Link Belt	61 ⁺³ -2	83 ⁺² -1	57	82
3. 43 Hamilton St. Dorchester	Minor street	Residential	Wood 3-family house	Crane Link Belt	62 ⁺³ -3	86 ⁺² -1	57	84
4. 162 Callendar St. Franklin Field	Minor street	Residential	Large wood house	Crane Koehring 405	----	78 ⁺⁰ -0	--	75
5. 1980 Massachusetts Ave. Cambridge	Major arterial	Commercial	Restaurant (wood)	Crane	77 ⁺³ -2	84 ⁺¹ -2	74	81
6. Fulton St. North End	Off major expressway	Commercial	Large brick commercial building	Large bulldozer	----	80 ⁺⁰ -1	--	78

* With 95% confidence level.

OSHA Regulations. Noise levels deemed permissible by the Occupational Safety and Health Administration regulations* are shown below. Additional detailed noise measurements would be necessary in order to determine whether OSHA standards would be violated, though inference from measured data indicate that this is a possibility. The OSHA regulations indicate that when permissible noise exposure levels are exceeded "feasible administration or emergency controls or personal protective equipment control shall be utilized."

PERMISSIBLE NOISE EXPOSURES

<u>Hours Per Day</u>	<u>Sound Level dB(A)</u> <u>Slow Response</u>
8	90
6	92
4	95
3	97
2	100
1.5	102
1	105
.5	110
.25	115

Impact Assessment

To assess the impact of noise from demolition on the environment, measurements of actual demolition noise levels were made and compared with (1) ambient noise levels, (2) regulatory requirements, and (3) standards developed through previous studies to determine the level of noise likely to affect public health.

Field measurements were made of noise from demolition, using the techniques outlined in Appendix B. The measurement data are shown in Table 16. In every case the major source of noise was found to be the engine noise of the crane or bulldozer under observation. Other onsite noise included heavy trucks in low gear, falling debris striking the ground, and the crane clamshell bucket striking the structure. The noise ranged from 78-86 L₁₀dB(A) or 75-84 L_{eq}dB(A) measured at a distance of 50 feet.**

* OSHA 1910.95 Occupation Noise Exposure.

** A recent study on construction noise reports that cranes have levels ranging from 75 to 95 dB(A) at 50 feet; compactors, front loaders, and bulldozers have noise levels ranging from 72 to 97 dB(A) at 50 feet; and trucks have noise levels ranging from 68 to 96 dB(A) at 50 feet. Noise Control Survey, April 1974, Bureau of Noise Control, New York State Department of Environmental Conservation, Albany, N.Y. 12201. Additional data for truck noise levels can be found in a recent EPA Report, entitled: Background Document for Proposed Medium and Heavy Truck Noise Regulations, EPA-550/9-74-018, October 1974.

Table 17

ESTIMATES OF MAGNITUDES OF THE HEALTH EFFECTS OF NOISE*
(in dB(A))

<u>Effect</u>	<u>Moderate Level of Effect</u>	<u>Appreciable Level of Effect</u>
Hearing Damage Risk ^a	70	90
Speech Interference ^b	45	60
Sleep Interference ^b	40	70
Physiological Stress ^b	*	90
Startle ^b	*	110
Annoyance ^b	50	60
Task Interference ^b	55	75

Notes: a 8-hour daily exposure

b any exposure

* Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances, NTID 300.1, December 31, 1971.

A comparison of the noise from demolition with the ambient noise levels described in Table 16 shows that demolition L_{10} dB(A) noise levels are more than 5 dB(A) above the ambient L_{10} dB(A) noise levels. While a change of one decibel is just perceptible under ideal conditions, a change of three decibels is perceptible under everyday conditions, and a change of five decibels is clearly discernable. The comparison indicates that demolition noise levels will affect abutters, neighbors, and passers-by.

The period of time for which a particular community or street would be exposed to demolition noise will vary widely, depending on the number of buildings slated for demolition in the area. Hence, it is not possible to give precise estimates of the average length of time an area would be exposed. However, many streets will have two or three adjacent houses that are planned for demolition. In such situations, residents might be exposed to increased noise levels for a period of one to three weeks.

An assessment of the impacts of demolition noise on health can be made by comparing the estimates in Table 17 with measured demolition noise levels. From this comparison, it is clear that the levels of noise produced by demolition will not be of sufficient duration to pose the risk of damaging the hearing of abutters, neighbors, or passers-by. As Table 17 also shows, however, sound levels as low as 45 dB(A) may interfere with sleep. Even assuming a 20 dB(A) reduction in noise levels and closed windows, residents inside adjacent homes would experience noise at levels of 58-66 dB(A).

In sum, the noise from demolition would inevitably interfere to some extent with residents' sleep, were no special measures taken. It would interfere most severely with individuals who sleep during the day, with infants and with the aged. It would also trigger all of the indirect consequences of noise -- physiological stress, annoyance, surprise and task interference -- to an extent proportional to its intensity and duration.

By comparing the measured data on demolition noise levels (78-86 dB(A) at 50 feet) with the levels shown in Table 17 for hearing damage risk (greater than 70 dB(A)), it is also clear that noise levels of demolition may be sufficiently high to cause the risk of hearing damage to crane and bulldozer operators and other demolition workmen who use the equipment daily.

The results of the measurements also indicate that without special noise control regulations, demolition activity would at certain times produce L_{10} noise levels that will exceed current Boston Air and Noise Pollution Control Commission regulations requirements by as much as 6 dB(A). Therefore, the mitigating measures presented in the following section will be employed to reduce expected noise levels.

Mitigating Measures

General Procedures

This section provides general procedures for controlling noise and technical measures for reducing noise levels from demolition equipment and heavy trucks.

- Demolition contractors will have to quiet their equipment to comply with Boston noise regulations and participate in contracts with the City, or
- Demolition contractors will be required to apply for and receive a variance under regulation Y of the Boston noise regulations.
- Alternatively, demolition contractors can arrange with the Boston Air and Noise Pollution Control Commission for a permit that would allow demolition under the prescribed conditions.

In addition, the City of Boston will modify the demolition contract specifications to include requirements for:

- a one-day advance notice of demolition operations, to be given to the Little City Hall manager and property abutters. This action will help minimize complaints and negative attitudes.
- compliance with OSHA noise exposure standards and Boston noise regulations.

Technical Measures

In general, by using commercially available muffled machinery and by installing mufflers and housings on existing equipment, demolition contractors will be able to reduce the noise levels on equipment significantly to levels that meet Boston noise pollution control regulations. Three major types of equipment are used in demolition: cranes, trucks, and bulldozers. Other noise-generating equipment commonly used include picks, hammers, masonry saws, jackhammers, and compressors, dropping weight breakers, and oxy-acetylene torches. The noise levels of the most commonly used pieces of construction equipment and the noise-generating components of each are shown in Table 19, together with estimated reductions in noise levels with the application of feasible controls. Appendix C elaborates on the techniques and modifications that can be made on construction equipment to reduce noise.

UTILITIES

Current Conditions

Water Lines

The abandoned structures slated for demolition under the CDBG Program are supplied with water by the City of Boston's distribution system, administered by the Metropolitan District Commission (MDC). The Metropolitan Water District incorporates 32 communities and approximately 1,788,000 people, serviced by 250 miles of distribution mains, 14 distribution reservoirs and a total pumping capacity of over 450 million gallons per day. Beneath the impact area's streets lies a complete pipe network of low pressure and high pressure water lines, ranging in size from 8 inches to 12 inches in diameter.

Sanitary and Storm Sewer Lines

The MDC's Metropolitan Sewer District treats sanitary wastes from Boston and adjoining communities via two primary treatment facilities, three leadworks, and 223 miles of sewers receiving discharges from 4,800 miles of city and town sewers at 1,826 connecting points. The City of Boston is responsible for the combined sewage and storm drainage network within its boundaries, which include those neighborhoods affected by the demolition program. The system, which is designed to accept rainfall, industrial wastes, and sanitary sewage, consists of underground pipelines and approximately 72 stormwater drainage outlets having 200 individual tidegates.

Natural Gas, Electricity, and Steam

The Boston Gas Company provides natural gas service to the impact-area districts. Electric power and steam are supplied by Boston Edison.

Impact on the Environment

Criteria for Impact Assessment

The anticipated impact of the proposed project on local utilities is evaluated by determining: (1) whether the increased demand placed on the high pressure lines by hosing down the site for dust control will be significant; (2) whether a significant potential exists for damage to occur to utility lines during demolition; and (3) whether runoff for excavation will affect sewer systems.

Impact Assessment

During demolition, hoses will have to be hooked up to nearby hydrants, normally used for fire-fighting operations. However, the amount of water used will not seriously affect hydrant pressure. Furthermore, fire-fighting equipment would have priority use of the hydrants. Therefore, this impact is considered to be negligible.

No damage to utility lines is likely to occur, since the Commonwealth of Massachusetts, State Building Code Regulation Section 116.0, Subsection 116.1 explicitly states:

"Before a building can be demolished or removed, the owner or agent shall notify all utilities having service connections within a building such as water, electric, gas, sewer and other connections. A permit to demolish or remove a building shall not be issued until a release is obtained from the utilities stating that their respective service connections and appurtenant equipment, such as meters and regulators, have been removed or sealed and plugged in a safe manner."

Those sanitary and storm sewer networks immediately adjacent to a demolition site may receive a significant quantity of excavation runoff from extensive hosing or rainfall. If the amount of runoff is sizable, it may fill the catch basin and block the sewer lines, causing them to overflow.

Measures to Minimize Harm

In order to minimize the potential impacts of demolition on the utilities network, the following measures will be implemented by the City and the demolition contractor:

- Before demolition begins, the demolition contractors will complete a checklist indicating the date all utilities have been shut off.
- If there is reason to believe that a substantial amount of runoff has entered nearby storm sewers during demolition, catch basins will be checked and the City Sewer Division will be informed as to which catch basins require clearing.
- The City of Boston will notify the gas and electric companies when a demolition contract has gone out for bid. This will enable these utilities to anticipate and avoid any potential problems arising from demolition.

WATER QUALITY

Current Conditions

Drinking Water

The City of Boston is supplied with drinking water from the Quabbin Reservoir, distributed by the Boston Public Works Department.

Surface Water

Boston has a combined storm and sanitary sewage collection and treatment system that ultimately discharges all wastewater into Boston Harbor. The Deer Island treatment plant provides only primary treatment and chlorination before discharging the effluent into Boston Harbor; however, plans are under negotiation to upgrade the plant to comply with the requirements of the Federal Water Pollution Control Act. The combined nature of the system causes it to overload with runoff in heavy rainfall and discharge the overflow into the Harbor, untreated.

Impacts of the Project on the Environment

Effects on Drinking Water Quality

The CDBG demolition project will have no effect on the quality of drinking water. The City building code requires sealing the curb stop to prevent intrusions into the water main that might otherwise contaminate the water supply. Closing the street stop may also be necessary or desirable, depending upon the individual site.

Effects on Surface Water

Changes in the amounts and quality of runoff from the proposed demolition sites would have an immeasurably small effect on water quality in Boston Harbor. Demolition would expose more permeable ground for the absorption of rain water, and slightly decrease runoff during short rainstorms. However, the decrease would have no measurable effect on the quality of water in Boston Harbor.

During a long rainstorm, the amount of runoff would remain the same whether buildings were demolished or left standing because once the ground is saturated, runoff is inevitable. It is during such

storms that the sewer system normally overloads and some of the combined sanitary and storm sewage is discharged untreated into Boston Harbor. The quantity of sewage also would be very small, and also would be immeasurable.

The erosive runoff from cleared, unplanted land will contain larger amounts of silt, sand, and gravel than runoff from the sites as they now exist, or from planted lots. All runoff flows into the streets and enters street gutters where catch basins trap heavy solids such as sand and gravel. Because these materials are removed from the runoff before it enters the sewers, runoff from the cleared sites will contribute only minimally to the turbidity of untreated storm sewage. During normal rainstorms, the sewage treatment plant will remove the silt before it reaches Boston Harbor. During intense storms, the turbidity of Boston Harbor may increase slightly and temporarily, because of the increased silt load and inability of the sewage treatment plant to handle large storm loads. As vegetation is established on the cleared sites, even this will cease to be a problem.

Because the buildings proposed for demolition are now abandoned, no sanitary sewage is discharged from them, and this will not be changed by the planned demolition. The City of Boston requires the demolition contractor to obtain a permit from the Sewer Division of the Department of Public Works to ensure that sewer lines from demolished buildings will be sealed to prevent the infiltration of sand and silt into sewer lines.

Significant adverse effects on water quality could result from improper disposal of demolition materials. Prior to 1972, when the practice was banned, waste from demolition was frequently barged out to sea and burned. Debris being loaded onto the barges frequently fell into the water; partially burned debris and ashes were dumped into the ocean, and eventually some washed to shore. In addition to damaging the environment visually, the debris affected water quality by depleting the oxygen content and damaged marine life.

A second significant adverse effect could result from disposing of building debris in improperly sited landfills, where it could contaminate ground or surface water, although most building debris is fairly stable. Incinerating combustible materials could also affect water quality where ash is disposed of improperly or quench waters are treated inadequately.

Measures to Mitigate Harm

- The demolition contract will specify that all materials not recycled be disposed of in an approved landfill or incinerator to ensure that no contamination of surface or ground water will occur.

- On steep sites, measures will be taken immediately after demolition to control erosion. Measures will include scarification or tracking to roughen surfaces; mulching with hay or straw; binding soil with chemicals; and seeding, sodding, or covering areas with jute netting followed by seeding.

PUBLIC HEALTH AND SAFETY

This section of the report describes the potential effects of demolition on the safety of the public and of workmen; and on the behavior of rodents, especially rats.

Safety of the Public and Workmen

The abandoned and unsafe buildings which would be demolished under the program currently represent a hazard to public health and safety. As indicated in Chapter II, fires are frequently started in the buildings -- some by arson and others accidentally. In areas where the buildings are made of wood, fire quickly spreads from one to another, endangering the lives of many neighborhood residents.

Children are attracted by the mystery and forbidding aura that surrounds abandoned buildings. The weak building structures and presence of rats makes the buildings a hazardous place to play. The shelter offered by the abandoned buildings also attracts drug addicts and sellers, making the buildings even more dangerous for children.

Impact of the Project on the Environment

The demolition of these unsafe buildings will have a generally beneficial effect on public safety by removing an obvious safety hazard. Historically, there have been few accidents involving bystanders during demolition, and the public is well protected during building demolition by the State Building Code. However, the very large increase in the number of demolitions could increase the number of accidents to bystanders proportionately. Since the CDBG demolition program is expected roughly to double the current number of demolitions, the number of accidents could double as well.

Measures to Minimize Harm

To avoid any increase in accidents, the Office of Community Development and the Building Department will ensure that the following provisions of the 1975 State Building Code are strictly enforced.

SECTION 1305.0 PROTECTION OF PUBLIC AND WORKMEN

Whenever a building or structure is erected, altered, repaired, removed or demolished, the operation shall be conducted in a safe manner and suitable protection for the general public and workmen employed thereon shall be provided.

1305.1 FENCES

Every construction operation located five (5) feet or less from the street lot line shall be enclosed with a fence not less than eight (8) feet high to prevent entry of unauthorized persons. When located more than five (5) feet from the street lot line, a fence or other barrier shall be erected when required by the building official. All fences shall be of adequate strength to resist the wind pressure specified in Section 714.0.

1305.2 SIDEWALK SHED

1305.21 WITHIN TEN (10) FEET OF STREET LOT LINE: When any building or part thereof which is located within ten (10) feet of the street lot line is to be erected or raised to exceed forty (40) feet in height, or whenever a building more than forty (40) feet in height within ten (10) feet of the street lot line is to be demolished, a sidewalk shed shall be erected and maintained for the full length of the building on all street fronts for the entire time that work is performed on the exterior of the building.

1305.22 WITHIN TWENTY (20) FEET OF STREET LOT LINE: When the building being demolished or erected is located within twenty (20) feet of the street lot line and is more than forty (40) feet in height, exterior flare fans or catch platforms shall be erected at vertical intervals of not more than two (2) stories.

1305.3 THRUST-OUT PLATFORMS

The building official may approve thrust-out platforms or other substitute protections in lieu of sidewalk sheds when deemed adequate to insure the public safety. No thrust-out platforms shall be used for the storage of material.

1305.4 WATCHMAN

Whenever a building is being demolished, erected, or altered, a watchman shall be employed to warn the general public when intermittent hazardous operations are conducted across the sidewalk or walkway.

Rodent Control

Current Conditions

Rodents, particularly rats, are an especially serious public health nuisance in many Boston neighborhoods. Historically, rats have been the carriers of such dread diseases as plague, murine typhus fever, and leptospirosis. In today's urban setting their threat to public health is primarily that of physical injury and infection to infants and young children who may be bitten, and contamination of food. Rats harbor a number of human pathogens, including the bacteria which cause "rat bite fever" and food poisoning. Any food they contaminate is unfit for human consumption. Rats thrive in areas where sanitation and garbage disposal are poor.

Since 1966, five critical areas in Boston -- Back Bay, the South End, Roxbury, Dorchester, and Mattapan -- have been the focus of an exemplary rat extermination program sponsored by the Boston Housing Inspection Department. Operating with an annual budget of \$60,000, the Department maintains an inspection and education drive and contracts out the field rodent control work. The land in each critical area is treated four times a year. Coverage outdoors includes alleys, yards, and vacant lots. The program does not include any indoor extermination.

Timing is of the utmost importance for the success of this type of program. The scheduled blanket coverage of "blitz" treatments are made when chances of reducing the adult rat population are greatest; that is, during April, July, September, and November. The program has been very successful in reducing the rat population, even though it has made no effort to improve general sanitary conditions.

Impact of the Project on the Environment

Most of the buildings scheduled for demolition under the CDBG program are located in the City's critical rat areas. Their dilapidated conditions would seem to provide ideal harborages for rats, and indeed, several of the buildings inspected for this EIS show unmistakable signs of rat habitation. The demolition of these structures would cause rats to migrate into neighboring houses, unless mitigating measures were taken. To avoid this adverse impact, which could increase the public health risks to the neighboring population, all of the buildings to be demolished will be exterminated prior to demolition, as described below.

Measures to Minimize Harm

Knowledge of the life cycle and behavior of rats is essential to formulating an effective rodent control program in conjunction with this

project. The rats common to Boston belong to the species Rattus norvegicus, commonly called the Norway, brown, sewer, wharf, barn, water, or grey rat. They are adaptable to almost any environment and require only an ample food supply and safe harborage. Rats are primarily nocturnal animals, seeking dark places and foraging and feeding at night when their natural enemies are less active. Deserted buildings with deteriorated walls, doors, and windows provide easy entrance and ideal harborage. Because rats will eat almost anything that man or domestic animals eat, the constant food supply made available by indiscriminate waste and garbage disposal provides an ideal environment. Rats love water, and they will readily harbor in a structure where there is a break in the sewer line which permits feeding in the sewer without the necessity of seeking food outdoors.

Although rats are capable of breeding all 12 months of the year, reproduction seems to be greatest during the months of April through September. The average female produces three to six litters per year, with seven or eight offspring in each litter. The gestation period is 21-25 days and the young reach maturity in two to four months.

Rats normally migrate twice a year -- in the spring to improve feeding and living conditions for their young, and in the fall to seek better shelter inside structures for the cold months. A critical reduction in their food supply or destruction or removal of their harborage will cause immediate migration.

The buildings scheduled for demolition will be treated twice, two or three weeks prior to leveling. It will take an experienced exterminator from five to forty five minutes to treat each building, depending on the building conditions. Three rodenticides have been approved for use in rat control by the Department of Housing Inspection: zinc phosphide, warfarin and ANTU. All toxicants will be used according to approved label directions. These materials are toxic to children and household pets and will, therefore, be baited with unattractive foods, such as partially decayed fruits, to avoid accidental ingestion by other animals and children. In addition, the baits will be applied only to burrows and harborages to reduce accessibility. The rodent control contractor will be responsible for patrolling each treated site on the day following each treatment to remove and safely dispose of all rodent carcasses. To the greatest extent possible, the rodent control contractors and the Boston Housing Inspection Department will coordinate their extermination schedules to provide the maximum protection to the neighborhood.

Extermination will be carried out by qualified firms having a Massachusetts Pesticide Board Supervisory License and carrying a Certificate of Insurance in force with Comprehensive Public Liability in amounts of \$250,000/500,000 and property damage of \$100,000. In addition, the policy will include Contractual Liability.

Other precautions, carried out by the demolition contractors, will also help control the rat population. The demolition contractor will be responsible for sealing sewer lines leading from the buildings, which is important to prevent rats from seeking the safe harborage offered by these conduits. (See section on utility impact.) In addition, the leveled sites will be cleared of all rubble which could become a rat harborage.

V. PROBABLE IMPACTS ON THE SOCIOECONOMIC ENVIRONMENT AND MEASURES TO MINIMIZE HARM

This chapter identifies the potential impacts of the CDBG Demolition Program on the socioeconomic environment and specifies measures to be taken to reduce those impacts that may be adverse. The chapter is divided into four sections:

- economic
- social
- aesthetic
- historic preservation

Like the material in the previous chapter, these discussions are organized in terms of current environmental conditions, impacts on the environment, and measures to minimize harm.

ECONOMIC IMPACTS

The potential economic impacts of the demolition are of three types: short term employment; long term cost increases associated with the increased costs of solid waste disposal, rat extermination and protection of the public; long term insurance cost decreases for neighborhood residents; and greater potential for reinvestment in certain neighborhoods.

Employment

Observations of residential building demolitions have shown that the demolition of a residential structure requires an average of three workmen 2.5 days (20 hours), or a total of 60 man-hours of effort. In addition, the extermination of each building twice prior to demolition requires two men an average of .5 hours on each occasion, or about 2 man-hours per building. Finally, demolition requires that an average of 40 small truckloads of fill be delivered to the site. The amount of effort varies with the type of fill; however, 40 man-hours per demolition is a reasonable estimate. In total, approximately 102 man-hours of effort are required for a single demolition.

The 900 residential demolitions planned under the CDBG program would require approximately 91,800 man-hours of effort over a two-year period. About 40,800 man-hours would be needed the first year, and 51,000 the second year. Assuming 2,000 man-hours in a year, this work effort translates into 20 new construction jobs during the first year and 25.5 during the second year. Employment of demolition workers would have a beneficial impact on Boston's depressed labor market, since

approximately 25 percent of the construction and demolition work force is now unemployed.

Cost of Measures to Minimize Harm

Several of the measures discussed in Chapter IV will increase the cost of demolition over the current average of \$2,075 per structure.* These include the cost of disposal at an approved sanitary landfill site and the cost of systematic extermination of rats. The additional cost for solid waste has been estimated at \$400 to \$800 per building; extermination at \$30 per building. Thus, the additional cost resulting from measures to minimize harm is therefore estimated at \$430 to \$830 per building.

Insurance Cost and Availability

Homeowners and tenants of neighborhoods containing large numbers of abandoned buildings are generally unable to purchase comprehensive fire and theft insurance. When insurance is available, the cost is so high that it is prohibitive for many neighborhood residents. The CDBG demolition program would have a beneficial effect on this situation by making fire and theft insurance more readily available, and at a lower cost.

Potential for Reinvestment

The CDBG demolition program is expected to increase investors confidence in the economic viability of some of the impact neighborhoods. Given other favorable economic conditions, such as a demand for housing or commercial services in the impact area and a generally expanded money supply, this increased confidence could bring some tangible economic benefits to the city in the form of increased assessed valuation and property taxes, and to property owners in the form of increased property values. These are long term benefits, however; economic conditions are not likely to spur these economic gains in the near future.

* The most recent demolition contracts under the CDBG demolition program were awarded for \$43,262 and \$39,705, or a total of \$82,967 for 20 buildings or \$2075 per building.

SOCIAL IMPACTS

This section identifies the kinds of social conditions associated with abandoned buildings in a residential community. It also examines typical attitudes held by local residents toward the problems created by abandoned buildings. Finally, it identifies those changes likely to occur under the CDBG Unsafe Building Clearance Program.

Current Conditions

The most important social impacts associated with abandoned buildings are threats of fire, criminal activity, and accidents; and the effect of abandonment on the stability of the neighborhood. The residents' attitudes about abandoned buildings may differ among neighborhoods, and their concerns may be increased or reduced by demolition, however, most frequently, they are fear-related.

Hazards of Abandoned Buildings*

Abandoned buildings are closely associated with the hazards of accidents, fire, and crime. Typically, a building has deteriorated extensively prior to final abandonment. Costly repairs go unmade and trees, shrubs, and yards are left unattended.

Once the building is abandoned, physical deterioration accelerates. Vandals quickly remove any saleable equipment--copper pipes, flooring, doors, heating equipment -- even the heavy timbers that support the structure. Its poor physical condition leads to unfortunate accidents, largely to children who are attracted to the premises by that which is taboo. Firefighters are subject to greater risks when extinguishing a fire in an abandoned and unsafe building.

The threat of fire from abandoned buildings is probably the most uniformly held fear of neighborhood residents. Whether started accidentally or by arson, a fire in a dilapidated building burns quickly out of control and threatens adjacent property.

Abandoned buildings become homes for illegal and illicit activities. Groups of young people invade abandoned structures for use as hang-outs. Drug addicts and dealers take refuge in them. Squatters--usually vagrants, but sometimes merely poor families--move in for a while. These activities threaten the security and peace of mind of those who live in the neighborhood and those who must walk by.

* Since the hazards of abandoned buildings are an important social issue, they are treated here, as well as in the Public Safety and Health section.

Neighborhood Stability

All neighborhoods affected by the CDBG Unsafe Building Clearance Program are currently experiencing decline and abandonment, as described in Chapter III. Some still in the early stages of decline, are relatively stable, but the loss of status and racial and ethnic change are significant. Other transitional neighborhoods are already experiencing increasing residential and commercial disinvestment. Still others are very unstable and have seen considerable abandonment and population attrition. All of the neighborhoods affected by the program can be grouped into one of these three categories for analytical purposes. (See Table 20.)

Stable neighborhoods are characterized by a relatively steady population, a relatively high percentage of owner-occupied housing, moderate to strong private investment, and low rates of housing abandonment. The Woodbourne neighborhood of Jamaica Plain is the most stable in the impact area. Uphams Corner, the Codman Hill and Fields Corner West neighborhoods of Dorchester and many streets in Franklin Field, appear to be stable, although some residents are concerned that their neighborhoods may be declining because of population attrition, and housing abandonment. Three neighborhoods in the Mission Hill Little City Hall area are improving: Back of the Hill, the Roxbury Tenants of Harvard, and some parts of Mission Hill Proper.

A neighborhood in transition is characterized as having a declining population base, changing ethnic population mix, a moderate to low level of owner-occupied housing, moderate to low private investment, and increasing rates of housing abandonment. The transitional neighborhoods include Egleston Square, Hyde Square and Stoneybrook in Jamaica Plain, all of South Boston; Meetinghouse Hill and Codman Square West in Dorchester; portions of Franklin Field; Mission Hill Proper; and Brighton Circle in Mission Hill; and Highland Park, Washington Park, and portions of neighborhoods A and D in Roxbury. Wellington Hill in Mattapan is transitional but improving.

An unstable neighborhood is marked by increasing population attrition, rapid increase in the percentage of the population that is poor, increasing numbers of minorities, very low rates of housing ownership, and high rates of abandonment. Unstable neighborhoods are to be found in Franklin Field; in the Worthington and Mission Hill Project in Mission Hill; Mount Bowdoin and Codman Square West in Dorchester; and the remaining parts of Roxbury.

Table 20

CATEGORIZATION OF NEIGHBORHOODS IN THE IMPACT AREA
BY DEGREE OF NEIGHBORHOOD STABILITY

<u>Relatively Stable Neighborhoods</u>	<u>Neighborhoods in Transition</u>	<u>Unstable Neighborhoods</u>
<u>Jamaica Plain</u>	<u>Jamaica Plain</u>	
Woodbourne	Egleston Square Hyde Square Stoneybrook	
<u>Uphams Corner</u> →		
	<u>South Boston</u> →	
<u>Dorchester</u>	<u>Dorchester</u>	<u>Dorchester</u>
Codman Hill →	Meetinghouse Hill	Mount Bowdoin
Fields Corner	Codman Square West	
West →		
<u>Franklin Field</u>	<u>Franklin Field</u>	<u>Franklin Field</u>
Individual areas north of Morton Street	Portions of upper Franklin Field north of Franklin Field playground	Portions of Lower Franklin Field and near the housing projects
	<u>Roxbury</u>	<u>Roxbury</u>
	Portions of Higland Park	Area A
	Portions of Washington Park	Area B
	Lower half of Area B	Area C
	Lower portions of Area D	Area D
		Washington Park
	<u>Mattapan</u>	
	← Wellington Hill	
<u>Mission Hill</u>	<u>Mission Hill</u>	<u>Mission Hill</u>
Roxbury Tenants of Harvard	Portions of Mission Hill Proper	Mission Hill Project
Portions of Back of the Hill	Portions of Back of the Hill	Worthington Street area
Portions of Mission Hill Proper		

Residents' Attitudes Toward Abandoned Buildings

Residents of all neighborhoods--stable, transitional and unstable--view abandoned buildings as a threat to their well-being and the stability of their neighborhood. The ever-present fear of fire, combined with the apprehension that arises from living near unsafe buildings and the social abuses they may lead to, leaves neighborhood residents anxious about their personal security. Although these attitudes are common to all types of neighborhoods, they vary by the extent to which the neighborhood is actually threatened by the conditions associated with abandoned buildings. For example, in a relatively stable neighborhood where only a few isolated buildings have been abandoned, apprehension about fire and crime is concentrated in the immediate vicinity of the abandoned buildings. On the other hand, in an unstable neighborhood, where crime is increasing, the expectation that an abandoned buildings will draw additional crime heightens residents' apprehensions.

Even deeper than these concerns about security is the attitude that the abandoned building itself is a symbol of neighborhood decline. Again, in a relatively stable neighborhood, an occasional abandoned house is not likely to be viewed this way. However, in an unstable or transitional neighborhood an abandoned building is closely associated with the pattern of social and economic deterioration which characterizes the neighborhood overall. In these areas, abandoned buildings are associated with deteriorating property conditions, declining property values, and unsuccessful efforts to maintain or improve the neighborhood in the face of ever increasing blight. Increasing numbers of abandoned buildings heighten an already strong sense of frustration and disillusionment with community improvement programs of all types.

Impact of the Project on the Environment

Criteria for Assessment

The CDBG Unsafe Building Clearance Program would alter the social conditions associated with abandoned buildings, including the stability of the neighborhood in which they are found, and would influence residents' attitudes about abandonment and demolition. Three criteria have been specified for assessing the effects of demolition on the social environment:

- Effect of the project on the incidence of fires, crime and accidents
- Effect of the project on the rate of abandonment
- Effect of the project on residents' attitudes toward their neighborhood.

Impact Assessment

Two characteristics of the CDBG Unsafe Building Clearance Program could affect the social environment in the impact neighborhoods:

- size of the program
- location and intensity of the demolition

Since the social conditions of the impact area vary from one neighborhood to another, the effects of the program vary as well. This section assesses the impact of the CDBG demolition program on the social conditions of the three different types of neighborhoods previously identified as stable, transitional and unstable.

Stable Neighborhoods

In a stable community, demolition of abandoned buildings would significantly reduce the hazards from fire and accidents and the potential for criminal activity. Removal of unsafe buildings would eliminate ablighting influence and thereby help to stabilize the neighborhood and stem the tide of further abandonment. The vacant land potentially would stimulate private investment and increase the value of nearby properties. Residents' fears of neighborhood decline would lessen, and they would be encouraged to make improvements to their property.

Overall the demolition program is likely to improve social conditions and the stability of the neighborhood and be perceived as a valid response to neighborhood problems.

Transitional Neighborhoods

In these, as in stable neighborhoods, the demolition of a building and elimination of a fire and accident hazard, would improve security and hence living conditions. Crime would either be reduced or simply move away from the abandoned building to a safer harborage within the same general area, depending on local conditions.

The effect of demolition in these neighborhoods could vary with its location and intensity. If the sites were dispersed, the impact would probably be absorbed easily. In this case, demolition would decrease abandonment and might even increase confidence and stability in the neighborhood.

However, when abandoned buildings are clustered together and all must be demolished, demolition would create large tracts of vacant land that may be economically undevelopable in the near term. Transitional neighborhoods are more likely than stable ones to be threatened by larger scale demolition, because it could lead to further deterioration and abandonment. To the extent that this actually happens, residents of these transitional neighborhoods could have negative attitudes toward the CDBG Program. Rather than perceiving demolition to be a positive, blight-removing force neighborhood residents, they are more likely to perceive the program to be inadequate because it deals only with the symptom of decline and not the problem itself.

Unstable Neighborhoods

As elsewhere, the demolition of abandoned and unsafe buildings would immediately resolve fire and crime hazards and the related fears of local residents. However, since these neighborhoods are in such turmoil, and housing abandonment continues undiminished, it is unlikely that increased demolition would have as great an impact--beneficial or adverse--on neighborhood stability as it would have in the other neighborhoods. Instead, demolition might be perceived as a tool for coping with the physical blight discussed above.

Measures to Minimize Harm

A number of actions may be taken to minimize the potentially adverse impacts of demolition.

- The boarding program will be accelerated overall, and immediate action will be taken to board residential buildings which are in good or fair condition, especially if they are located in areas near historic sites, or near large tracts of already vacant land.
- Demolition and boarding priorities will be set by Little City Hall managers in coordination with community leaders and local historians. Each LCH manager will develop a procedure for obtaining community preferences and implement it regularly to update priorities. Close coordination with the community is expected to decrease residents' suspicions of demolition and help identify structures that have unusual value to the community.
- The demolition contractors will be requested to notify LCH managers when they are going to begin demolition in their area. The LCH managers will post notices in the vicinity of the sites, which give the demolition schedule.

- The LCH managers will increase their efforts to inform the public about the purposes of both the demolition program and the REVIVAL program for revitalizing vacant City-owned lots. Since neither of these programs is well known to the public, there are occasional misunderstandings about their purposes and their relation to other community development programs. To remedy this situation, LCH managers will post notices of explanation at the vacant lot and prepare press releases for the city and community newspapers.

AESTHETICS

The extent and way in which an abandoned, deteriorating house and its demolition affect the aesthetic quality of a neighborhood depends on two factors: first, the physical characteristics of the dominant housing type--form, texture, scale, massing and siting; second, the existing physical and psychological condition of the neighborhood overall. Taken together, these factors define the visual coherence or "character" of a neighborhood.

Some of these factors are discernible only to the trained eye of the architect or historian; however, while a resident may not discriminate among those factors which comprise the aesthetic character of his neighborhood, this section is written from the view that, together, these factors give a visual character to a neighborhood that its residents can perceive. The aesthetic impacts of concern here are different from the concerns of the historian (discussed in the next section) for preserving structures representative of Boston's cultural heritage. The historical impacts discussed there are remote--impacts to the chronicles of history and culture; the aesthetic impacts to be considered here are immediate, in both time and place.

Current Conditions

Each of the CDBG neighborhoods is unique in architectural style and scale, and in the perceptions of the neighborhood held by the residents. Thus, the assessment of the relative impacts of demolition must be made for each neighborhood, perhaps for each block, individually in view of the current physical and socio-economic characteristics of each.

Physical Characteristics of Housing in CDBG Neighborhoods

The range of architectural styles to be found in the CDBG neighborhoods is broad: there are many turn of the century houses built as suburban "castles" by wealthy businessmen. Examples of Gothic, Greek Revival, Federal, Colonial and Victorian are found along well-landscaped streets in Roxbury and Dorchester. Bow-fronted brick rowhouses typify stretches of Upper Roxbury, Franklin Field, South Boston and Dorchester. And the three-family, wood-frame house known locally as the "triple-decker" predominates in many Boston neighborhoods, including Jamaica Plain, Mission Hill, and Dorchester. In each neighborhood, aesthetic characteristics of scale, massing, and distance from the street differ. Large, distinctive homes are set back from the street, creating an entirely different visual scene from a row of undulating townhouses, or densely grouped triple-deckers.

Condition of the Neighborhood Overall

Relatively stable neighborhoods, such as Jamaica Plain and Dorchester have a large number of owner-occupied houses, private investment, and a stable population, all of which tend to indicate likely neighborhood concern for the potential impacts of demolition on the aesthetic quality of their environment.

The transitional neighborhoods of Hyde Square, Egleston Square, Stoneybrook, in Jamaica Plain and portions of Dorchester, Franklin Field, Roxbury, and Mission Hill are characterized by only a moderate degree of home ownership and private investment and a changing population base, which tends to suggest less commitment to and concern for the appearance of the neighborhood overall.

The unstable portions of Franklin Field, Dorchester, Mission Hill, and Roxbury are marked by rapid population changes and low rates of home ownership, as well as by the high rates of abandonment that make the potential aesthetic impacts of demolition highest. In neighborhoods where the population is largely transient and impoverished, residents' perceptions of and concerns for the aesthetic impacts of demolition are probably lowest.

Impact of the Project on the Environment

Criteria for Assessment

Physical Characteristics of Housing Type

- Form or shape: vertically or horizontally; number of stories; smooth versus decorated facade and decorative elements such as porches, balconies, cornices, columns, wood or stone carving; the shape of exterior walls--whether curved or straight; the shape and size of windows and doors, porches, roofs.
- Color and texture of building materials: brick, wood, stone and stucco and the way they are used; smooth stone or rough, flat wood boards or overlapping clapboard, brick laid flush.
- Scale: the sizes of buildings in relation to one another, to human beings, and to open space.
- Massing and siting: grouping of buildings and their placement on the land. Considerations of street width and terrain. Buildings may be clustered together or strewn

over the land on small lots; four-story structures may abut one another and cover the land, leaving no open space for many blocks; or a forty-story building may house the same number of people and use a fraction of the land, leaving considerable open space.

Differing Perceptions of Neighborhoods by Residents

The criteria used in the previous section of this chapter to measure the social impacts of demolition in terms of the relative stability of each CDBG neighborhood will be used here, as they also indicate residents' attitudes toward their visual environment. The components of stability--population base, income, owner-occupancy, ethnic composition, abandonment--were used previously to rank each neighborhood as (1) relatively stable, (2) transitional, or (3) unstable. As neighborhood stability and residents' concerns about aesthetic impacts on their environment tend to accord, they will be used together with physical housing characteristics as criteria for measuring the aesthetic impacts of demolition on a particular site.

Impact on the Environment

Any abandoned house is visually depressing: broken windows, sagging roof and porches destroy its function as a shelter; an interior exposed to passers-by betrays the privacy its inhabitants once sought. Any abandoned and deteriorating property would seem obviously to detract from the overall aesthetic quality of a neighborhood, and its residents' perceptions of that condition.

Broken glass, litter, weeds can be aesthetically undesirable. They can also be visual reminders to neighbors of the reasons for abandonment; or they can have little discernible impact at all. One or even several abandoned houses along a block of Beacon Street in Boston's Back Bay, for example, will have minimal aesthetic impact on its surroundings. Neighboring residents will continue to maintain their own property and perhaps even that of the abandoned house, picking up litter, sweeping sidewalks. However, even one or two well-boarded buildings in a transitional neighborhood such as Hyde Square can be a psychologically unsettling or fearful reminder to residents of the changing social and economic base of their neighborhood. The impact of abandonment in such neighborhoods can be one of visual and psychological depression that causes residents to stop caring about the maintenance of their own property, or even to move out of the neighborhood entirely. For these transitional neighborhoods, the impact of demolition can be positive because it removes the visual reminder of instability.

In other neighborhoods, the physical characteristics of the housing type may be the overwhelming criteria for assessing demolition. For example, the demolition of one or several houses in a block of bowfront, brick townhouses will leave a gaping hold that destroys the visual continuity of the street; whereas, the demolition of one or several triple-deckers on closely spaced lots could provide desirable open space for residents, as could the removal of an abandoned and deteriorated single-family house on a block of widely separated houses.

The extent of demolition or boarding in relation to the size and scale of remaining buildings also will bear on its aesthetic impact. Blocks of brick rowhouses or triple-deckers rising up in isolation surrounded by leveled land are aesthetically barren. Isolated inhabited houses surrounded by boarded ones may be equally barren.

Whether or not the vacant land that results from demolition is maintained, and in fact does enhance the aesthetic quality of a neighborhood, will depend in large part on the stability of a neighborhood and residents' pride in it.

In the most unstable neighborhoods, even those with architecturally distinguished buildings, broken glass, litter and weeds may be common. In some cases an inhabited house may barely be distinguished from an abandoned one. It is arguable that residents perceive the impact of demolition primarily as a safety issue and that aesthetics may be of greater concern to the architectural or cultural historian of the area.

In summary, the dispersal of the 900 CDBG demolition sites among architecturally and socially diverse neighborhoods necessarily makes any assessment of aesthetic impacts of demolition site-specific, dependent on the architectural style and historic value of the building, the land form and terrain, and the socio-economic composition and aesthetic values of the population. In general, the demolition will be most beneficial in neighborhoods comprised of detached houses, and where the demolition is not so extensive that the remaining buildings are surrounded by vast amounts of vacant land. The impact of demolition is likely to be most adverse for neighborhoods whose visual coherence depends on the uninterrupted pattern of existing structures, and for those buildings having intrinsic historical value.

Measures to Minimize Harm

In order to reduce the chances for adverse impacts on the aesthetic quality of a neighborhood by the demolition program, the following measures will be taken:

- o Each Little City Hall manager will obtain community views on aesthetic characteristics perceived to be important to maintain in each neighborhood.
- o In neighborhoods identified by the LCH managers, where the visual coherence of the street or neighborhood would be adversely affected by demolition, high priority will be given to boarding instead of demolition.

HISTORIC PRESERVATION

Under the requirements of the National Historic Preservation Act, Executive Order 11593, and the National Environmental Policy Act, the review of historic sites for purposes of identifying adverse and beneficial impacts of a Federal action must conform to specific procedures. Three distinct types of review are required, prior to enactment of any Federal action which may impact historic sites.

The first review pertains to any "district, site, building, structure, or object" significant to American history by virtue of its listing on the National Register of Historic Places. Properties which have been formally approved for eligibility to the Register by the Secretary of the Department of the Interior or his agent, also must be reviewed for impacts. This review is conducted under procedures established in Section 106 of the National Historic Preservation Act.

A second review is made of properties which have been nominated by the State Historical Preservation Officer for Register status, but which have not received a firm and final decision from the Department of the Interior. Because the outcome of any pending application is uncertain, normally these properties also are reviewed under the 106 procedures.

A third and final review is required to identify "districts, sites, buildings, structures or objects" which, when formally surveyed by the State Historical Preservation Officer, might be found eligible for Register status. This review normally would occur by searching a State survey of historic properties. However, neither the Massachusetts Historical Society nor the Boston Landmarks Commission has been able to fund such a survey. Under these circumstances, an informal survey was taken of neighborhood historical societies, architectural historians, and others having knowledge of the City's historical and cultural resources. The results of the reviews of sites either listed on or eligible for the National Register of Historic Places is discussed below.

Current Conditions: Properties on the National Register of Historic Places

The National Register properties discussed here are limited to those which are located in, or very near to, one of the Little City Hall Districts in which the CDGB demolition program will take place. Table 1 in Appendix E locates National Register sites by LCH area, and indicates their location, the current condition and use of the site, and any planned improvements, as required under the historic preservation legislation. This information is summarized below by Little City Hall area and shown on the accompanying figures at the end of this section.

Roxbury. There are five Register buildings and one Register district located in the area where abandoned buildings in poor condition are to be found. In all, there are fourteen properties that could be affected if abandoned buildings in close proximity were demolished.

With the exception of the First Church of Roxbury, the Spooner-Lambert House, the Dudley School and the William Lloyd Garrison House, the historic structures are either in fair or poor condition. Several are vacant and boarded. One--the Dilloway-Thomas House--has been ravaged by fire but is scheduled to be restored for use as the Afro-American History Museum. The John Eliot Square, which has the largest number of historic sites, is also scheduled for renovation, if urban renewal funds currently allocated are matched with state and local funds. Finally, the Alvah Kittredge House, located adjacent to Alvah Kittredge Square, will be restored if the Kittredge Urban Renewal Project is funded.

Dorchester. Although there are a number of N.R.H.P. properties in Dorchester, none is within the impact area as defined.

Uphams Corner. Two properties--the Dorchester North Burying Ground and the Clapp Houses--are within the impact area of the Uphams Corner LCH District. The Burying Ground is in moderate condition, but needs some improvements. The Clapp Houses also need restoration, and have been allocated \$5,000 by the Massachusetts Historical Commission for such purposes.

Jamaica Plain. The Loring-Greenough House, located on property which is the site of the earliest town settlement in Jamaica Plain, is in the impact area. It is in excellent condition, and is maintained as residence for the Tuesday Club, which opens it to the public for tours.

Mission Hill. Though part of the Jamaica Plain LCH District, Mission Hill is discussed separately owing to its separate historical development. There are no Register properties here.

Franklin Field. The James Blake House, newly listed on the Register, is to be found in this LCH district.

South Boston. No Register properties have been located in the impact area.

Mattapan. No Register properties are to be found in this area.

Current Conditions: Properties Pending Review for Eligibility

The Boston Landmarks Commission and the Massachusetts Historical Commission (whose director is the State Historical Preservation Officer) have indicated that there are no applications for Register status pending with the Department of the Interior for any historic sites in the impact area. However, the Boston Landmarks Commission has on file about 20 applications for review and possible submission to the Department of the Interior. Appendix F contains a letter from the Boston Landmarks Commission to this effect. Since none of the sites has been properly reviewed and acted upon by the Commission, they are listed with the sites not now protected by the National Register.

Current Conditions: Properties Which Might Be Found Eligible for Register Status if Properly Surveyed and Evaluated

The properties included in this review are properties which have been informally identified by local historical societies or interested citizens, or the Boston Landmarks Commission. This list is not to be interpreted as the definitive survey of sites and landmarks which are of local interest and possibly meriting Register nomination. It merely reflects the best efforts of the City to identify and locate such properties, given limited resources. These properties are listed in Table 2 of Appendix E and discussed below by Little City Hall area.

Roxbury. Three specific structures and five large-sized districts are listed in Appendix E, Table 2. This extensive listing reflects the long history of Roxbury (settled as part of the original Massachusetts Bay Colony), the very interesting and varied architectural styles of the housing in the area, and an active historical society. Some of the properties identified are extensions of boundaries of properties currently registered on the N.R.H.P. This is particularly true of the area around the Eliot Burying Ground and the John Eliot Square. Others are listed because there is currently an active program of educating Roxbury citizens on their district's history. The visibility of the buildings and their value to the Roxbury community, and to the City, is reflected in a brochure, titled "The Hill: The Middle Classes Come to Roxbury: 1870 - ."

Dorchester. Here, also, some fairly large areas have been identified by the Dorchester Historical Society and architectural historians of the area. Meetinghouse Hill and the Mellville Avenue-Wellesley Park districts include a number of streets on which distinctive buildings and residences are to be found. Eight houses dating from the 18th Century are included in the Norfolk Street area and the First Parish Church surroundings. Finally, a number of miscellaneous houses scattered throughout the areas identified are noted.

Uphams Corner. Five or six individual streets, very closely related physically to one another, have been identified. Some 17th Century houses are to be found here, as well as examples of Victorian, Gothic and Colonial Revival architecture, among others.

Franklin Field. The only site identified so far is the periphery of Franklin Park. Designation of the entire perimeter of Franklin Park has been suggested by Christopher Iannella, State Senator, and a bill to that effect now is in the State Ways and Means Committee.

South Boston. This district presents the most uncertain listing; it has not been sufficiently examined, and only one item--an early church, chapel, and cemetery are listed. Historians feel there may be other sites in the area which might be nominated, if they were discovered and properly evaluated.

Jamaica Plain. Surrounding the Loring-Greenough House is Monument Square, a collection of buildings resting in the historical center of Jamaica Plain and surveyed in 1970 for eligibility to the Register. The Square and a number of small streets are included.

Mission Hill. This very small area also has been insufficiently surveyed and only one site--the very old Our Lady of Perpetual Help Church, now known as The Mission Church--is listed.

Mattapan. A number of extremely early houses are identified as being in the Mattapan LCH District. One 17th Century house and two early 18th Century houses are found within a few blocks of one another. In addition, a small milestone marker, and a public library have been identified.

Impacts of the Project on the Environment

Criteria for Assessment

Under the terms of the National Historic Preservation Act, the "criteria of effect" must be applied to any Register properties which might be impacted by a planned Federal project. These criteria of effect are reproduced below.

"Generally, adverse effects occur under conditions which include, but are not limited to,

(a) Destruction or alteration of all or part of a property;

(b) Isolation from or alteration of its surrounding environment;

(c) Introduction of visual, audible or atmospheric elements that are out of character with the property, or alter its setting;

(d) Transfer or sale of a federally owned property without adequate conditions or restrictions regarding preservation, maintenance, or use; and

(e) Neglect of a property resulting in its deterioration or destruction."

Further, an effect is interpreted as "any condition of the undertaking which causes or may cause any change, beneficial or adverse, in the quality of the historical, architectural, archeological or cultural characteristics that qualify the property to the National Register."

Impacts on National Register Properties

Since the exact addresses of the buildings to be demolished under the CDBG Spot Demolition Program are not known, it is not possible to assess impacts on specific properties. However, potential effects can be discussed in general. Precautions for protecting specific sites are described in the following section.

A site might be adversely affected if structures required to place the historic building in its proper architectural or historic context were removed. Any demolition which changed the character of the property by isolating it from its historic context would be considered adverse. A historic site could also be adversely affected if a visual distraction were created adjacent to it. A vacant lot could qualify as such a distraction. Specific demolition-related impacts of noise, dust and potential erosion could also result in short-term adverse impacts.

The beneficial impacts of demolition would include: restoring a site to its former value by creating open space, replacing the original visual context of an historic site, removing incompatible structures from the vicinity.

Impacts on Unlisted Historic Properties

Unlisted historic properties would be impacted by the same negative effects as listed historic properties. In addition, the demolition of an historic property prior to an adequate evaluation of its value or its potential for restoration would result in an adverse impact.

Measures to Minimize Harm

- The City of Boston will comply with the 106 review procedure which is outlined in Appendix D. The City of Boston will consult with the State Historical Preservation Officer and Director of the Massachusetts Historical Commission, a member of the Advisory Council on Historic Preservation, and others to establish the adverse or beneficial impacts likely to result from a demolition project.

- To protect a potentially valuable property from demolition, the City of Boston will require the Little City Hall Managers to consult with local historic preservation groups, or any professionals they designate in their stead before priorities for demolition are developed and forwarded to the Mayor's Office. Whenever, in the judgment of the LCH Manager and the historical group, a valuable site has the potential to be adversely affected, the site will be identified and some appropriate measures taken to reduce the impact. Abandoned buildings of historic value will be identified and boarded to protect them from further deterioration.

- The Little City Hall Manager and the neighborhood group will forward any definitive evaluations of sites to the Boston Landmarks Commission and the Massachusetts Historical Society, so that accurate city-wide and state-wide records of historic buildings may be maintained in the absence of a formal City Historic Commission.

- Priorities for expending funds for boarding will be given to unboarded historic properties, particularly those listed on the National Register of Historic Places, but also those identified as being of local historic value but not listed on the Register. In addition, unboarded structures immediately adjacent, or in very close proximity, to historic sites should receive priority for boarding.

- The City will send a list of buildings scheduled for demolition to the Historic American Buildings Survey of the National Park Service, the Boston Redevelopment Authority, and the Society for the Preservation

of New England Antiquities, and advise them of the proposed action. The H.A.B.S. will then be invited to take appropriate photographs and make appropriate drawings for inclusion in the Massachusetts H.A.B.S. Catalog. Under their current program, priority is given to buildings or alteration.

L E G E N D

Historic Areas of Importance in Roxbury

Sites listed on the National Register of Historic Places, or found eligible for Register status

1. Alvah Kittredge House, 12 Linwood Street
2. Eliot Burying Ground, Eustis and Washington Streets
3. John Eliot Square, Dudley and Highland Streets
 - Ionic Hall
 - First Church of Roxbury
 - Putnam Chapel
 - Spooner-Lambert House
 - Dilloway-Thomas House
 - Dudley School
 - Cox Building
 - John Eliot Hotel
 - Norfolk House
4. Edward Everett Hale House, 12 Morley Street
5. William Lloyd Garrison House, 125 Highland Street
6. Shirley-Eustis House, 31-37 Shirley Street
7. Franklin Park

Urban renewal areas where rehabilitation and restoration is planned for historic buildings. (horizontal shading)

1. Alvah Kittredge Urban Renewal Area
8. Madison Park Campus High School Urban Renewal Area

Sites and districts identified by the Afro-American History Museum, Roxbury Historical Society or the Boston Landmarks Commission as having potential to be found eligible for the National Register of Historic Places.

- ① Highland Park
- ② Eliot Burying Ground - Surrounding Streets
- ③ The Hill Section of Roxbury Highlands
- ④ Winthrop-to-Warren Area
- ⑤ Periphery of Franklin Park
- ⑥ Joseph Warren House, 130 Warren Street
- ⑦ Amory Street Workers Houses, 200 block of Amory Street
- ⑧ Seavern Avenue Workers Houses, 0-100 block of Seavern Avenue (just off the map; the Seavern district merges with Jamaica Plain)
- ⑨ Victorian Brick Buildings, Dudley and Hampden
 - Firehouse
 - Church and convent
 - School
 - Police station



C.D.B.G. Demolition Program
 Historic Areas of Importance in Roxbury
 City of Boston

LEGEND

Historic Areas of Importance in Dorchester

Sites not listed on the National Register of Historic Places, but of historic value

- ① Rosewell-Gleason House, corner of Clayborne and Park
- ② Melville Avenue-Wellesley Park area
- ③ Meetinghouse Hill area
 - First Parish Church of Dorchester
 - Common across from the church
 - Six 18th century houses
 - Other structures not identified
- ④ Second Church of Dorchester, Codman Square



C.D.B.G. Demolition Program
Historic Areas of Importance in Dorchester
City of Boston

LEGEND

Historic Areas of Importance in Uphams Corner

Sites listed on the National Register of Historic Places, or found eligible for Register status

1. Clapp Houses, 199 and 195 Boston Street
2. Dorchester North Burying Ground, Stoughton Street and Columbia Road

Sites not listed on the National Register of Historic Places, but of historic value

- ① Windemere Road
- ② Sawyer Avenue
- ③ Downer Street at Sawyer Avenue
- ④ Everett Street
4 houses built in imitation of Gothic Revival 18th century homes, using original foundations; connected townhouses
- ⑤ 67 Stoughton Street, 1639 house



C.D.B.G. Demolition Program

Historic Areas of Importance in Uphams Corner
City of Boston

L E G E N D

Historic Areas of Importance in Jamaica Plain

Sites listed on the National Register of Historic Places, or found eligible for Register status

1. Loring-Greenough House, 12 South Street at Greenough
2. The Olmsted Park System (only partially in Jamaica Plain)
 - Franklin Park
 - Arborway
 - Jamaica Park
 - Olmsted (Leverett Park)
 - Muddy River
 - Back Bay Fens

Sites not listed on the National Register of Historic Places, but of historic value

- ① Monument Square, the Historic Center of Jamaica Plain
 - Civil War monument and milestone marker
 - Unitarian Church and Cemetery
 - Two houses
 - The Eliot School
 - Curtis Hall (on periphery)
 - Eliot Hall
 - Two 19th century churches
- ② Periphery of Franklin Park
- ③ Periphery along the length of the Olmsted Park System
- ④ Chestnut and Lamartine Streets



C.D.B.G. Demolition Program

Historic Areas of Importance in Jamaica Plain
City of Boston

L E G E N D

Historic Areas of Importance in Mission Hill

Sites not listed on the National Register of Historic Places, but
of historic value

- ① The Mission Church, also known as the Basilica of Our Lady of
Perpetual Health, 1545 Tremont Street



C.D.B.G. Demolition Program

Historic Areas of Importance in Mission Hill

City of Boston

Figure 16

LEGEND

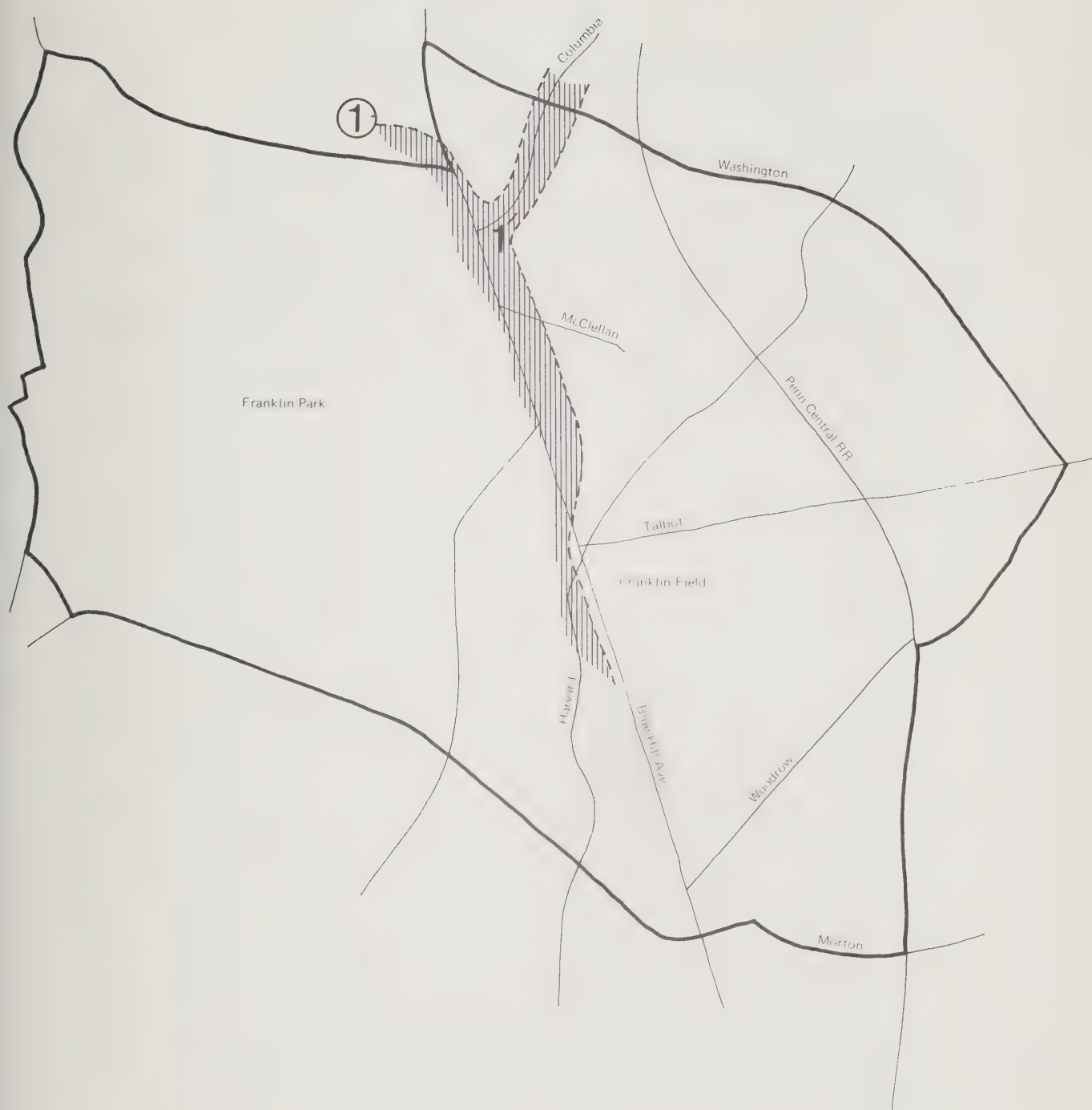
Historic Areas of Importance in Franklin Park

Sites listed on the National Register of Historic Places, or found eligible for Register status

1. James Blake House, 735 Columbia Road

Sites not listed on the National Register of Historic Places, but of historic value

- ① Periphery of Franklin Park, especially the Columbia Road area



C.D.B.G. Demolition Program

Historic Areas of Importance in Franklin Field
City of Boston

Figure 17

LEGEND

Historic Areas of Importance in Mattapan

Sites not listed on the National Register of Historic Places, but
of historic value

- ① Clark Farm, at the corner of Norfolk Street and Hosmer
Farm house at the corner of Norfolk and Woolson
- ② 1659 House, on Babson Street near Blue Hill Avenue
- ③ Hazelton Street Library, corner of Blue Hill Avenue and Hazelton
- ④ Milestone marker on Blue Hill Avenue



C.D.B.G. Demolition Program

Historic Areas of Importance in Mattapan
City of Boston

VI. IMPACT OF THE ENVIRONMENT ON THE PROPOSED PROJECT

In 1974, the Department of Housing and Urban Development (HUD) published guidelines requiring that consideration be given in an Environmental Impact Statement to major constraints or opportunities presented by the existing environment which serve to limit or contribute to the viability of the proposed project. Constraints most commonly arise with projects involving new construction in an environment that is, in some way, incompatible with the proposed action.

While these impacts of the environment on the proposed project generally do not apply to demolition, they do in a few instances. The following questions have been formulated to assess the effect of the environment on the CDBG project.

CRITERIA FOR ASSESSMENT

- Are there any environmental considerations which may influence administrative procedures associated with demolition, or which affect specific demolition methods?
- Are there any environmental considerations which have influenced the location of the program?
- Are there any environmental factors which may influence the size of the program, i.e., the number of abandoned buildings to be demolished?
- Are there any environmental factors which may affect the phasing and duration of the program?

IMPACT ASSESSMENT

Assessment of each aspect of the environment reveals that approximately eleven environmental conditions are likely to affect the CDBG program; specifically in the areas of land use, transportation, solid waste, public health and safety, social, and historic preservation.

Land Use

The highly dense, residential character of the impact area, where buildings are close to one another and are, in some instances, adjoining, limits the type of demolition methods that can be used. Current city regulations prohibit use of the wrecking-ball method of demolition, or its equivalent, in dense areas without the express permission of the Building Commissioner or his authorized representative. This permission is granted only when it can be clearly shown that the use of the "ball" will not endanger neighboring structures.

that the use of the "ball" will not cause a large part of the building to fall at one time and that it will not endanger neighboring structures.

In addition, the Commonwealth of Massachusetts State Building Code requires that certain procedures be followed during and after demolition to protect adjoining buildings. The owner of the structure to be razed, or his agent, protect roofs, keep exits open, and preserve all adjoining independent and party walls from damage by whatever means are required--underpinning, weatherproofing, or bracing.

Another State Building Code regulation that must be met by the boarding program stipulates that "whenever a building is being demolished, erected, or altered, a watchman shall be employed to warn the general public when intermittent hazardous operations are conducted across the sidewalk or walkway."

Transportation

Many of the streets located within the impact area are used extensively during the morning and evening rush hour periods. High traffic volumes are directly responsible for the 7:00 A.M. to 3:30 P.M. schedule maintained by demolition contractors, which avoids traffic when transporting equipment to the site and evening traffic when transporting demolition debris to the landfill site. Constructors also schedule a break in demolition activity during peak morning traffic.

Solid Waste

Boston's lack of adequate landfill capacity has two potential implications for the program: first, it could slow the rate of demolition; or second, it could increase tipping costs, and hence, program costs.

Public Health and Safety

Poor sanitary conditions in many parts of the impact area make abandoned structures desirable harborages for rats and other rodents. Extermination is therefore an integral part of the demolition program, and the costs of pesticides and labor must be budgeted into the program.

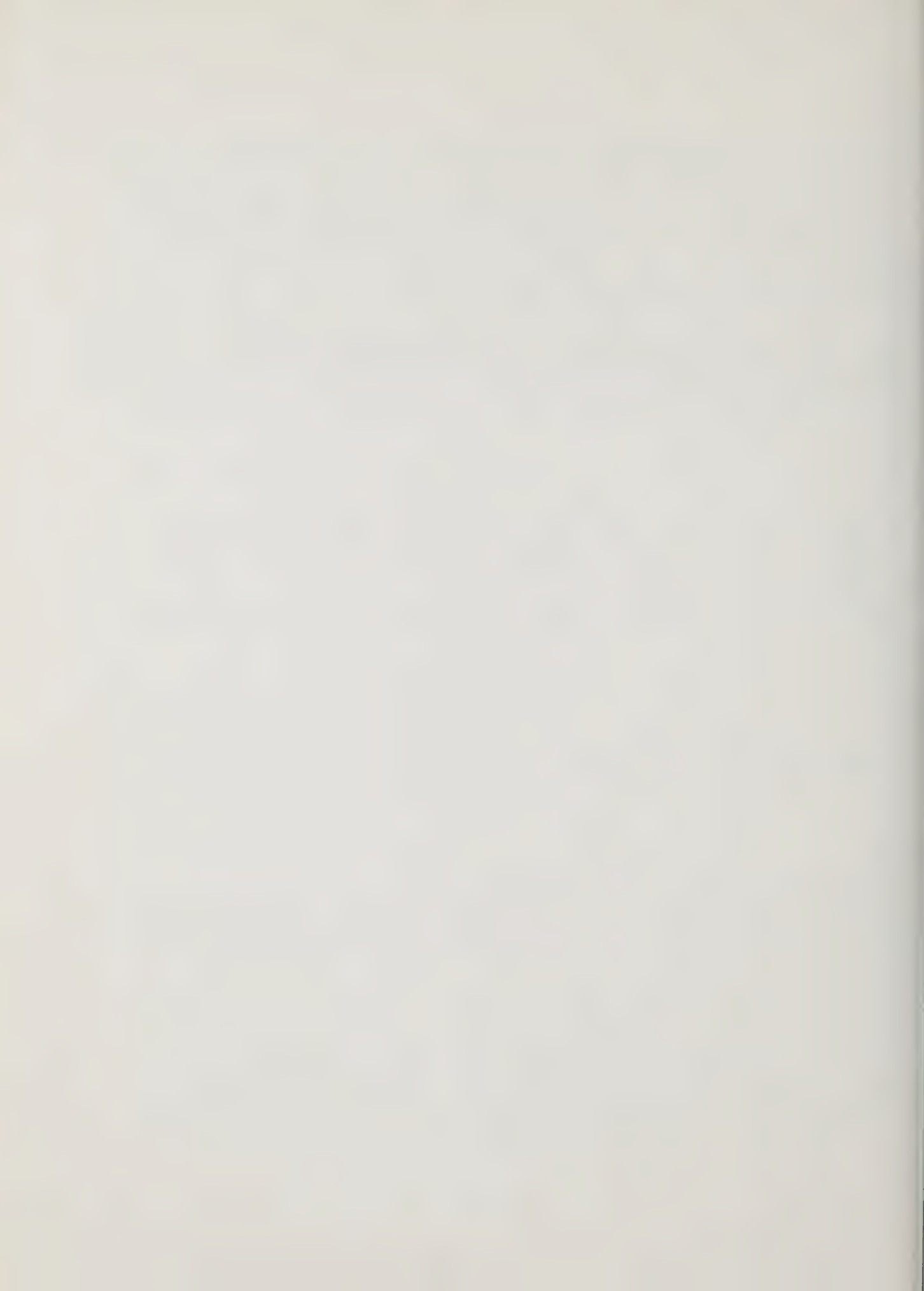
Social

The social environment for the impact area is characterized by a high incidence of crime and vandalism, which has two potential impacts on the CDBG program. First, costly and potentially recyclable materials and fixtures -- like valuable copper pipes -- have already been stripped from many of the abandoned structures. This vandalism increases the

cost of the program by decreasing revenues otherwise available from the sale of salvagable demolition materials, Second, to preclude the risk of vandalism associated with demolition equipment left on the site overnight, some demolition contractors prefer to complete demolitions in a single day, which means they may begin earlier in the morning and work until dark.

Historic Preservation

The presence of historic buildings near demolition sites curtails the use of the wrecking-ball method of demolition as outlined under Land Use. In addition, the 106 review process required for historic sites could delay the program slightly.



VII. ALTERNATIVES TO THE PROPOSED ACTION

This section describes several alternatives to the CDBG demolition program as it has been proposed, and assesses the adverse and beneficial environmental impacts of each. As indicated in Chapter II, the primary goal of the demolition project is to eliminate the fire and safety hazards associated with abandoned buildings. Besides demolition, there are two major alternatives for accomplishing this goal: rehabilitation and efficient boarding. These alternatives are discussed below, along with the "no action" alternative.

REHABILITATION

Rehabilitation of abandoned buildings offers the advantage of maintaining potentially salvageable units of the housing stock while achieving the goal of reducing fire and safety hazards. Since the maintenance of existing ~~or~~ renewable housing is a primary goal of the Community Development Program as a whole, this alternative has been given serious consideration.

As shown in Table 1 of Chapter II, there were approximately 1145 abandoned buildings identified by the windshield survey of January 1975. For each building, information is given on its location (Little City Hall area and street address), condition (good, fair or poor), and whether or not it is boarded. For the purposes of this analysis, an abandoned building has been said to qualify for rehabilitation if it meets the following criteria:

- good condition
- boarded
- located in an area where there has been some recent reinvestment.

The criterion of "good condition" is important because it gives an indication of the feasibility and square foot cost of renovation. If the square foot cost is too high when compared to a comparable building, it will not be rehabilitated. Boarding is essential to maintaining a building in a condition that can be rehabilitated. An abandoned building left unboarded is quickly vandalized and deteriorates. But even if these two conditions are met, the social and economic conditions in the area in which the building is located must create a market for a renovated structure.

All of the buildings inventoried in the windshield survey were screened to determine which might qualify for rehabilitation according

to these criteria. As shown in Table 19, only 23 of the 1145 buildings, or about 2 percent, can be classified as being in good condition, boarded, and in an area where housing investment has recently occurred. Most of these buildings are in Roxbury and none in Dorchester or Franklin Field.

On the basis of this analysis, it must be concluded that rehabilitation, while appropriate for a few buildings, is not a viable alternative to the demolition program as proposed.

BOARDING

An efficient boarding program offers the advantage of retaining buildings which are in reasonably sound physical condition until social and economic conditions improve to a point where the buildings can be returned to the housing stock. Because retaining the housing stock is an overriding goal of the Community Development Program, the alternative of shifting resources from the demolition program to the boarding program has been considered seriously.

Boarding buildings in poor condition is not economical, because the cost of boarding averages \$1500.* However, those in good and fair condition should be boarded securely as soon as they are abandoned. The need to board is even more urgent if the building is near an historic property, an aesthetically sensitive area, or adjacent to an already large lot, where, in each case, demolition would create a larger, developable parcel of land. As shown in Table 20, 193 or 17 percent of the buildings in good and fair condition were not boarded at the time of the windshield survey. The largest percentage (28 percent) of unboarded buildings in reasonable condition were found in Mattapan, which suggests that rapid boarding is most needed here.

At an average cost of \$1,500 per boarding, it would cost \$289,500 to board all of the abandoned buildings in the impact area found by the Windshield Survey to be in need of boarding. CDBG program budget has already allocated \$312,500 for boarding; therefore, it is not necessary to shift funds from the demolition program to the boarding program in order to retain these residential buildings for future housing stock. The boarding program, as currently planned and funded, clearly can accomplish this. However, boarding all these buildings will not result in a commensurate decrease in demolitions because buildings are continually abandoned and demolitions continued to be needed.

NO ACTION

If the CDBG demolition program were not implemented, the fire and safety hazard posed by these abandoned buildings would go unabated.

* Boston Building Department, 1975.

Table 19

NUMBER OF ABANDONED BUILDINGS WHICH
MEET CRITERIA FOR REHABILITATION,
BY LITTLE CITY HALL AREA

LITTLE CITY HALL AREA	TOTAL NUMBER ABANDONED	NUMBER MEETING REHABILITATION CRITERIA
Roxbury	454	17
Dorchester	179	0
Jamaica Plain	145	3
South Boston	63	1
Franklin Field	139	0
Uphams Corner	58	1
Mattapan	107	1
TOTAL	1145	23

SOURCE: Windshield Survey, Boston Building
Department, January 1975.

Table 20

NUMBER AND PERCENT OF ABANDONED
BUILDINGS UNBOARDED AND IN GOOD
OR FAIR CONDITION, BY LITTLE CITY HALL AREA

Little City Hall Area	Total Number Abandoned	Good or Fair and Unboarded	
		Number	Percent
Roxbury	454	78	17
Dorchester	179	25	14
Jamaica Plain	145	27	19
South Boston	63	6	10
Franklin Field	139	22	16
Uphams Corner	58	5	9
Mattapan	107	30	28
TOTAL	1145	193	17

SOURCE: Windshield Survey, Boston Building Department, January 1975.

In addition, other beneficial effects of the program would be foregone. These include the:

- availability of land for open space
- extermination of rats and removal of rat harborages
- employment of demolition workers
- restoration of confidence in some neighborhoods
- improvement of the visual quality of some neighborhoods
- restoration of the value of some historic properties.

The potential adverse effects of the program that would be avoided by no action are all short-term and confined to the immediate vicinity of the site. They are:

- slight congestion and delay of traffic at demolition sites
- 20 percent increase in non-respirable dust
- 5 db(a) increase in ambient noise adjacent to the site.
Clearly, the avoidance of these minor environmental effects is far outweighed by the benefits of demolition.

VIII. CONTRACT PROVISIONS AND PROGRAM MODIFICATIONS TO MINIMIZE HARM

As a result of this environmental review, the City of Boston has identified a number of measures that it will take to ensure the protection of the physical and social environment during the CDBG demolition program. These measures are of two general types: revisions to the demolition contract specifications, and modifications or additions to the Clearance of Unsafe Buildings program itself. Each is described in detail below.

REVISIONS TO THE DEMOLITION CONTRACT SPECIFICATIONS

General Contract Provisions

The demolition contractors will be required to comply with the provisions for the 1975 State Building Code, in particular Article I, Administration and Enforcement, Sections 116.0 Demolition of Buildings and 117.0 Removal of Buildings; Article 13, Precautions During Building Operations, Sections 1304.0 Regulation of Lots, 1309.0 Storage of Materials, 1310.0 Removal of Waste Material and 1311.0 Protection of Adjoining Property.

Protection of the Public

In addition to complying with the general contract provisions, the demolition contractors will be responsible for posting signs near the site notifying the public of the demolition activity. This provision will reduce the potential for accidents to bystanders and traffic congestion in the immediate vicinity of the site.

Protecting Utilities

Wrecking contractors are now required by the demolition contract specifications to terminate all utility services to the buildings, specifically gas, electricity, telephone, water and sewer. Under the revised contract specifications, the demolition contractor will be required to show evidence of having done this. Evidence can be in the form of a checklist indicating the date each service was terminated for the building, or in any other form acceptable to the Building Department.

Air Quality

Demolition contractors are now required by their contract specifications to control dust, "as required by the Building and Health Departments." To accomplish this, they are required to have available enough fire hose to extend from the nearest fire hydrant to the building being

demolished. As a result of this environmental review, these specifications will be revised to require that the demolition contractors control demolition dust through continuous wetting of all demolition activities; that is, while razing the building, grinding debris and loading debris onto trucks, and filling and grading the vacant site.

Air Quality

Demolition contractors are now required by their contract specifications to control dust, "as required by the Building and Health Departments." To accomplish this, they are required to have available enough fire hose to extend from the nearest fire hydrant to the building being demolished. As a result of this environmental review, these specifications will be revised to require that the demolition contractors control demolition dust through continuous wetting of all demolition activities; that is, while razing the building, grinding debris and loading debris onto trucks, and filling and grading the vacant site.

Noise

The demolition contracts currently contain no specifications for noise. Therefore, a new provision will be added which will require demolition contractors to comply with the Regulations for the Control of Noise in the City of Boston, in particular Regulation 4, which restricts noise emitted from a construction or demolition site to an L_{10} value of 80 dBA at a distance of 50 feet from the site. Contractors unable to comply with these standards must apply for and receive a variance from the Boston Air and Noise Pollution Control Commission, under Regulation Y of the noise code. Alternatively, arrangements may be made with this same agency for a permit for noise emissions above the standards. The contracts will also stipulate that the contractors comply with the Occupational Safety and Health Administration regulations entitled, "Occupation Noise Exposure," number 1910.95, which limits the noise to which workmen may be exposed.

In addition to meeting these noise standards, the demolition contractors will be requested to notify the appropriate Little City Hall managers when they will be working in their area. This will enable the LCH managers to warn nearby residents and property abutters, and thereby avoid many noise complaints.

Solid Waste

The demolition contracts currently contain no provisions for the disposal of solid waste. However, the Building Department does require a notarized affidavit from the wreckers stating where the waste will be

hauled. A new contract specification will be added requiring that all demolition debris be disposed of at a facility approved by the Commonwealth of Massachusetts--either a sanitary landfill site or an incinerator. This requirement will be enforced by the Building Department through their review of the notarized affidavit presently required.

In addition, the demolition contractors will be encouraged to compact demolition debris and to recycle as much of the demolition material as is economically feasible. The higher costs associated with disposal in an approved sanitary landfill can be expected to cause demolition contractors to increase recycling and compaction, without the need for any more rigorous enforcement mechanism.

Rodent Control

The demolition contractors will be required to coordinate their demolition activities with a licensed exterminator, hired by the City of Boston to exterminate all abandoned buildings scheduled for demolition. The contract will specify that the City will hire the exterminators and that the demolition contractors are to reimburse the City for this expense under their contract.

MODIFICATIONS AND ADDITIONS TO THE PROGRAM

Accelerate the Boarding Program

As indicated in Chapter VII, Alternatives to the Proposed Action, approximately 193 buildings were identified in the windshield survey to be in fair or good condition and in need of boarding to discourage further deterioration. These buildings represent approximately 17 percent of the abandoned buildings inventoried. To avoid demolishing any buildings that could possibly be returned to the housing stock, the City will accelerate the Boarding Program, and will request that the Building Department board certain kinds of buildings as soon as they are abandoned. Buildings to be boarded promptly are all residential buildings in good and fair condition which are: adjacent to already large tracts of vacant land, or historic sites, or on streets whose aesthetic appeal would be significantly diminished by residential demolition or in an area when there is a market for rehabilitated housing.

Improve Communications Between the Office of Community Development and the Neighborhoods

The manager of the demolition and boarding programs will coordinate with the Deputy Director of the Office of Public Service who supervises

the LCH managers to ensure that the two interrelated programs of boarding and demolition are responsive to community needs and desires, particularly as they relate to public safety, aesthetics and historic preservation. One staff member from each LCH area will be assigned the responsibility of working with the Office of Community Development and the Office of Public Service on demolition and boarding priorities. In addition, each LCH manager will develop and implement a plan for regularly assessing community preferences and priorities for boarding and demolition. This may be accomplished in any number of ways, for example, through a procedure whereby already existing community groups and historic societies would review demolition priorities. The program manager will review these plans and will ensure that they are used regularly to update demolition and boarding priorities. These priorities will then be channeled through the Mayor's Office to the Building Department, where the demolition and boarding will be contracted out.

Investigate the Redevelopment Potential of Large Lots

Despite concerted efforts to the contrary, it is inevitable that some large lots will be created by the demolition of unsafe buildings. To minimize the potentially adverse effects of creating large parcels of vacant land that cannot be redeveloped economically by the private sector, the Office of Community Development will designate someone to work closely with the City's Economic Development and Industrial Commission, the Boston Redevelopment Authority, and the Massachusetts Housing Finance Agency to promote redevelopment of these large parcels.

ROLE OF THE BUILDING DEPARTMENT AND THE OFFICE OF COMMUNITY DEVELOPMENT

The Office of Community Development and the Building Department will enforce the revised demolition specifications and will carry out the following responsibilities:

- Review affidavits from contractors for the disposal of demolition waste
- Review demolition contractor checklists for the termination of all utilities.
- Notify the gas and electric companies of buildings to be demolished at the time the contracts go out for bid.
- Contract with exterminators for rodent control in the buildings to be demolished, and charge the demolition contractors for this work.

- Examine all buildings for friable asbestos during the initial building inspection. If asbestos is found, this information will be filed together with other information about the building and made available upon request to the Environmental Division of the State Department of Public Health and to the U.S. Environmental Protection Agency.
- Inform the Public Works Department about the location of ongoing demolition activities so that they can check catch basins for accumulation of large quantities of silt.

IX. SUMMARY OF ADVERSE AND UNAVOIDABLE IMPACTS

For the purposes of this report, unavoidable adverse impacts are defined to be those negative results of the demolition project that cannot be remedied by the measures previously outlined.

- Local traffic on narrow residential streets may be restricted by the transport of heavy-duty equipment to and from the site and the loading of trucks at the site. Delays will vary according to hour and physical site characteristics; however, they are not, in any case, expected to be longer than a few minutes.
- Approximately 20 percent of the dust generated by demolition will escape into the air, even though controlled by extensive wetting. These particles are not respirable, but they will cause soiling.
- Noise levels from demolition are expected to exceed present ambient levels by roughly five db(A)s. Mitigating measures, such as the installation of muffling apparatus on demolition equipment and rigid compliance with existing standards, cannot eliminate the incremental noise associated with demolition.

X. IRRETRIEVABLE AND IRREVERSIBLE COMMITMENTS OF RESOURCES

Because this is a demolition, rather than a construction, project, no commitment of material resources is required. In fact, the demolition will produce materials having recycling potential; however, land, labor, and capital resources will be required and are discussed below. Were all of the debris generated by the CDBG demolition program landfilled, up to 562,500 cubic yards of landfill capacity would be taken by the program. However, this must be weighed against the fact that the program will also retrieve 61.44 acres of land formerly in residential use.

The demolition project will result in the irretrievable commitment of manpower and machinery for the duration of the project, an anticipated 55.5 man-years of work over two years' time.

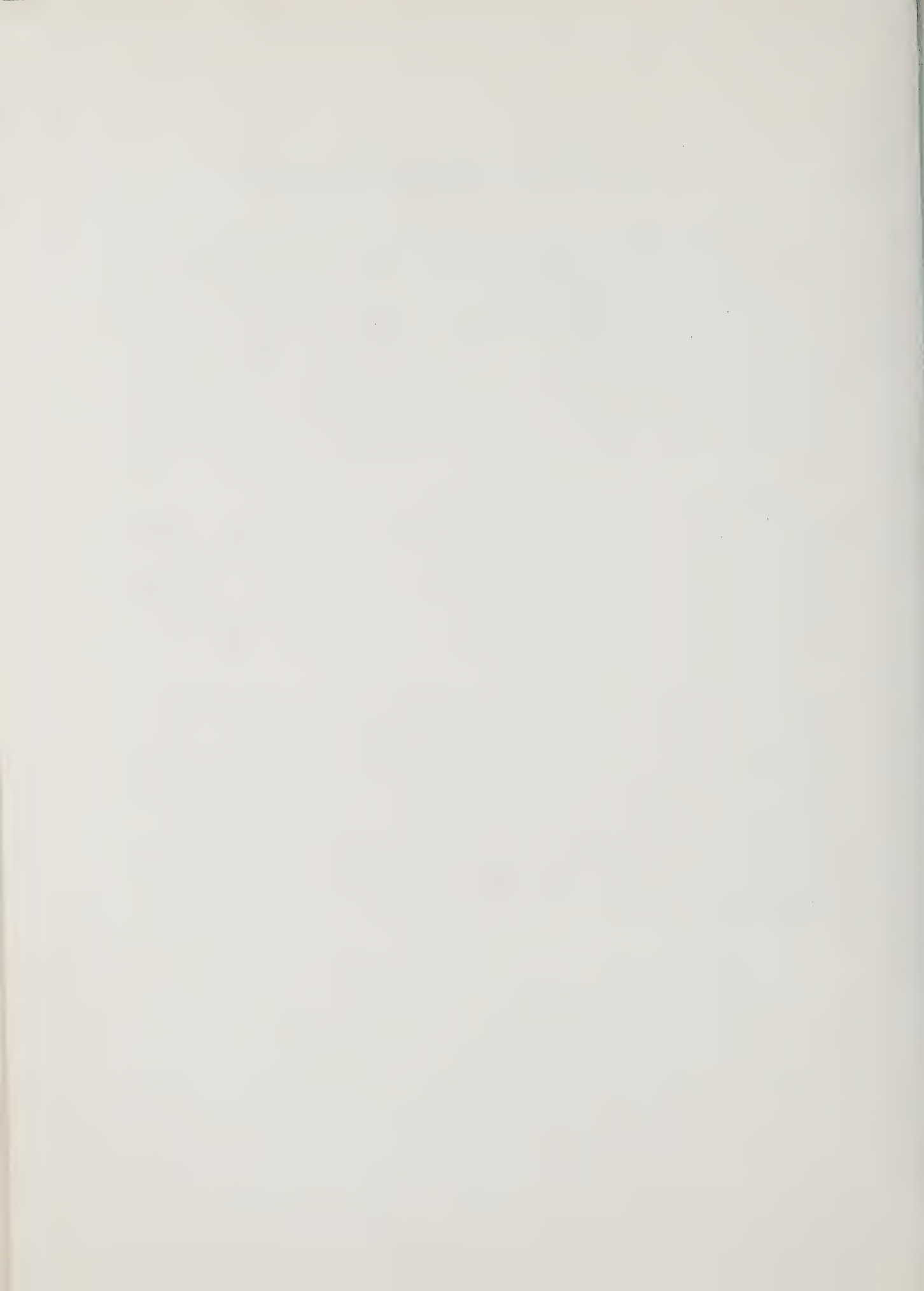
Irretrievable economic resources required by the demolition program for labor and equipment, including cost of associated activities such as rodent control and solid waste disposal, is \$1.6 million for fiscal years 1975 through 1976. A similar level of commitment is anticipated for the following fiscal year.

XI. USE OF THE ENVIRONMENT AND COMMITMENT OF RESOURCES VERSUS LONG-TERM PRODUCTIVITY

Each generation is a trustee of the environment for succeeding generations and, as such, must weigh all the factors that would tend to narrow options for the environment's future beneficial uses or pose long-range risks to health or safety. This chapter identifies the adverse environmental effects and resource commitments resulting from the CDBG demolition programs, and relates these to those aspects of the program that are environmentally or economically productive. The discussion is divided into two parts: short-term tradeoffs, and long-term tradeoffs. In this context, "short-term" is defined as the timespan of the demolition project, while "long-term" refers to that period of time in which all significant consequences of the proposed project will be experienced.

Short-term impacts of the proposed CDBG Clearance of Unsafe Buildings Program which represent loss to environmental quality include both adverse impacts on the environment, and irretrievable and irreversible commitments of resources. Short-term adverse impacts of the program include the noise of demolition, local traffic congestion, dust, and risk of accidents to workmen and bystanders. Short-term resource commitments entail cost outlays consisting of demolition labor and equipment, and extermination labor and expenses.

The program's adverse long-term impacts consist of altering neighborhood character and committing land for waste disposal from demolition. Only by incurring these adverse short- and long-term effects is it possible to realize the short- and long-term gains in environmental and economic productivity that result from the project. In the short-term, the gains are: increased employment, control of rodents, and a safer and more aesthetically satisfying environment. In the long-term, the benefits to public safety will continue. In addition, the potential exists for improving vacant lots, reducing population attrition and housing abandonment, and reinvesting in new housing and community services--none of which would be possible were the adverse environmental effects not incurred.



APPENDIX A

SOLID WASTE CALCULATIONS .

APPENDIX A

SOLID WASTE CALCULATIONS

I Volume

$$\frac{12.5 \text{ truckloads of demolition waste}}{3\text{-family structure}} \times \frac{\text{Year}}{12 \text{ months}} \times \frac{\text{month}}{20 \text{ days}} \times \frac{3\text{-family structure}}{3 \text{ dwelling units}} \times \frac{2250 \text{ dwelling units}}{\text{entire project}} \times \frac{60 \text{ cubic yards}}{\text{truckload of demolition waste}} = \frac{562,000}{\text{entire project}} \text{ in truck cubic yards of demolition waste}$$

II Truckloads Per Day

$$\frac{900 \text{ buildings}}{2 \text{ years}} \times \frac{\text{Year}}{12 \text{ months}} \times \frac{\text{month}}{20 \text{ days}} \times \frac{2.5 \text{ dwelling units}}{\text{building}} \times \frac{12.5 \text{ truckloads of demolition waste}}{3 \text{ dwelling units}} = \frac{20 \text{ truckloads of demolition waste}}{\text{per working day}}$$

III Density

Assume a three-family wood frame structure typically has 7.5 truckloads of wood waste and 4.5 truckloads of mixed wood and masonry waste. Assume that there are 10 tons of wood per 60 cubic yard truck and 17.5 tons of mixed wood and masonry per 60 cubic yard truck. This averages out to .21 tons per cubic yard for a wood frame structure.

Assume that a brick building has a demolition waste density of 17.5 tons per 60 cubic yards or .29 tons per cubic yard. Given that there are 561 wood frame buildings and 339 brick buildings, the average density if .24 tons per cubic yard or 480 pounds per cubic yard for the projects' demolition waste.

$$\frac{561 \text{ wood frame buildings} \times .21 \text{ ton/cu yd} + 339 \text{ brick buildings} \times .29 \text{ ton/cu yd}}{900 \text{ buildings in total}} = .24 \text{ tons/cu yd average building}$$

IV Incineration and Steam Recovery Potential

$$\frac{67,500 \text{ tons organic demolition waste}}{\text{entire project}} \times \frac{2000 \text{ pounds}}{\text{ton}} \times \frac{3000 \text{ Btu}}{\text{pound}} = \frac{4.05 \times 10^{11} \text{ Btu}}{\text{entire project}}$$

APPENDIX B

FIELD MEASUREMENTS OF NOISE

APPENDIX B

FIELD MEASUREMENTS OF NOISE

In order to evaluate ambient and demolition activity noise levels, sound measurements were taken on September 16-18, 1975, at several typical demolition sites. With the cooperation and aid from the Boston Air and Noise Pollution Control Commission, data were obtained with a General Radio Type 1565-C sound level meter, which conforms to the sound level meter performance characteristics standards set by the American National Standards Institute (ANSI) Standard S1.4-1971 Type 2.

Noise levels in decibels were taken on an "A" weighted scale, dB(A). The noise meter was set to "slow" response and a wind screen was utilized. Wind speeds were low. The instrument was placed approximately 4 feet above ground level and at least 50 feet from the demolition site. L_{10} dB(A) measurements were obtained by taking readings at 10-second intervals. A statistically significant number of readings (usually 50 or 100) is found when the 95 percent confidence level is less than or equal to 3 dB(A). For instance, if 50 readings are taken, then the first and the tenth highest recorded levels must be within 3 dB(A) of the fifth highest level; and if 100 readings are taken, the fifth and seventeenth highest recorded levels must be within 3 dB(A) of the tenth highest level.

This measurement technique is well suited to the measurement of ambient and continuous noise emissions; however, it is not well suited for the recording of impact noises.



APPENDIX C

NOISE REDUCING MODIFICATIONS
TO CONSTRUCTOR EQUIPMENT

APPENDIX C

NOISE-REDUCING MODIFICATIONS TO CONSTRUCTION EQUIPMENT

A recent EPA report* discusses construction equipment powered by internal combustion engines. Noise reduction techniques for two categories of equipment, highly mobile earth-moving equipment and partly mobile handling equipment, are summarized here.

Earth-moving equipment used in demolition projects includes bulldozers and front loaders. Internal combustion engines are used for propulsion, either on wheels or tracks, and for power-driven mechanisms such as buckets, arms and trenchers. Typically, engines are the predominant source for noise, with exhaust the most significant component and inlet and structural noise secondary. Other sources include mechanical and hydraulic transmissions and activation systems, and cooling fans. The greatest and most direct potential for noise abatement is the use of mufflers to quiet an engine.

Engine-powered handling equipment includes cranes and derricks. Their dominant source of noise is usually the prime mover. For earth-moving equipment, the predominant sources of noise are the engine, power transmission systems, and working mechanisms.

The main sources of truck noise are the engine, cooling fan, air intake and exhaust systems, and the tire-roadway interaction.

Engine noise reduction methods include modifying certain exterior surface covers and installing acoustic barriers in the engine enclosure. The air intake systems of trucks can be muffled by replacing older-style air cleaners with modern dry element air cleaners. Exhaust system noise can be reduced largely by installing new mufflers. Both of these components are sold by major muffler manufacturers. Noise from tires can be reduced by switching from crossbar to rib-type tires and from re-treaded to new tires.

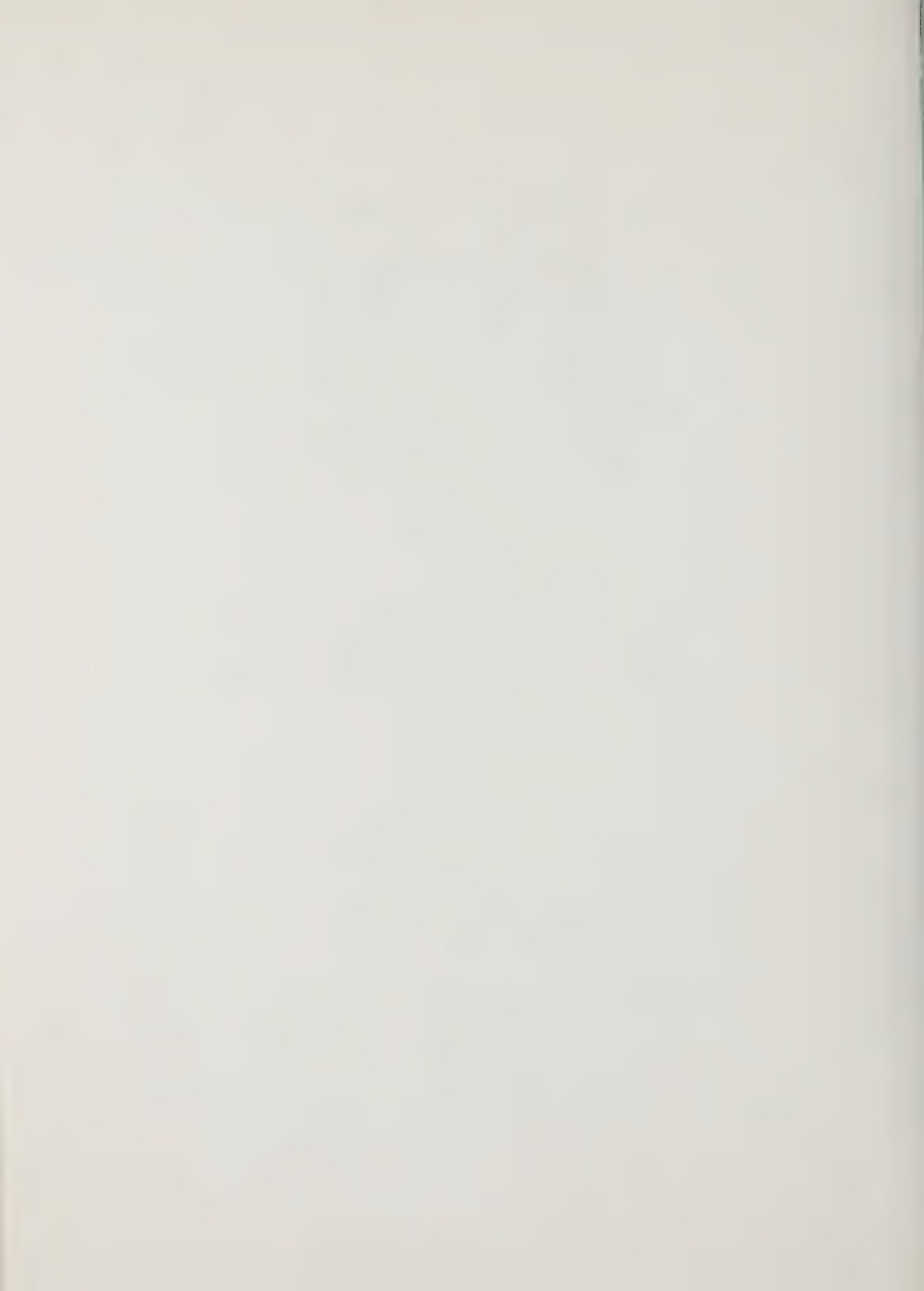
Additional data concerning truck noise reduction methods, new technology, and costs can be found in the following two recent EPA reports.**

* Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances, NTID 300.1, December 31, 1971.

**"Background Document for Inter-state Motor Carrier Noise Emission Regulations," October 1974, EPA-500/9-74-107 and "Background Document for Proposed Medium and Heavy Truck Noise Regulations," October, 1974, EPA-500/9-74-018.

APPENDIX D

PROCEDURES REQUIRED UNDER SECTION 106



APPENDIX D

PROCEDURES REQUIRED UNDER SECTION 106 OF THE NATIONAL HISTORIC PRESERVATION ACT

1. Federal agency initiating the action contacts the State Historical Preservation Office; an agent for the Federal agency may act in its place.
2. The State Historical Preservation Officer and the Advisory Council on Historic Preservation meet with the Federal agency, to consult on the adverse and beneficial impacts likely to occur from the Federal action.
3. If no adverse effect is found, the Federal agency is found to have complied with the law once the State Historic Preservation Officer has filed a report stating the conclusions of the consultations.
4. If an adverse effect is found (the Criteria for Adverse Effect having been applied) mitigating measures are developed in consultation with the requisite agencies.
5. If no mitigating measures can be determined, and this finding has been made following all legal requirements, the Federal agency is said to have complied with the law, once the State Historical Preservation Officer has filed a report stating the conclusions. The report is filed with the Advisory Council on Historic Preservation, and with the Federal agency seeking the consultation.

Application of the Procedure: the Case of Boston

1. A representative of the Mayor from the Office of Community Development meets with the environmental review officer of the Housing and Urban Development agency to determine necessity for 106 review.
2. The Mayor's representative, and/or the representative of H.U.D. consult with Mrs. Elizabeth Amadon and a representative of the Advisory Council on Historic Preservation regarding the effects of the project.
3. The consultations are carried out following the procedures outlined above, in numbers 3 through 5.

APPENDIX E

Table 1: Sites and Districts on the
National Register of His-
toric Places

Table 2: Sites and Districts Not
Listed on the National
Register of Historic
Places

Table 1

SITES AND DISTRICTS LISTED ON THE NATIONAL REGISTER OF
HISTORIC PLACES AND LOCATED WITHIN THE LITTLE CITY HALL
AREAS WHERE CDBG CLEARANCE OF UNSAFE PROGRAMS WILL TAKE PLACE

<u>Location of sites, by Little City Hall District</u>	<u>Name & street address of site, or district</u>	<u>Current condition and use of site</u>	<u>Planned improvements to site or district</u>
Roxbury	Alvah Kittredge House 12 Linwood Street	Fair to poor condition; headquarters of the Roxbury Action Program	R.A.P. has applied for urban renewal funds to renew the Alvah Kittredge Square, including the historic site itself.
	Eliot Burying Ground Eustis and Washington Streets	Fair to poor condition; currently owned by the City of Boston; plans have been made to trans- fer the property to the Boston Fire Museum Trust	The Massachusetts Historical Commission has allocated \$5,000 to the Boston Public Facilities Dept. for the restoration of the Eustis Street Fire Station, loca- ted on the grounds of the Burying Ground; if matching funds from non-Federal sources are raised, restoration will begin. The Boston Fire Museum Trust intends to voluntarily improve, maintain and patrol the Burying Ground, if the Fire Station is restored.
	John Eliot Square: Ionic Hall	Good condition; owned by St. Johns and St. James Diocesan Center; Episcopal denomination	The Diocesan Center recently spent some funds on a new addition to the house; it is well maintained.
	First Church of Roxbury	Good condition; used for services by parishioners of the church	Small trust fund is available for maintenance and improvements as long as the church is a valid parish church.

*Information provided by Ms. Judy McDonough, Boston Landmarks Commission
and Mr. Stephen Snell, Massachusetts Historical Commission

Table 1 - Continued

<u>Location of sites by Little City Hall District</u>	<u>Name & street address of site, or district</u>	<u>Current condition and use of site</u>	<u>Planned improvements to site or district</u>
	John Eliot Square (cont): Putnam Chapel	Moderately good; part of the First Church; leased to Fellows Athaeneum; used as library and study room.	Unknown
	Spooner-Lambert House	Fair to poor condition; private home	Unknown
	Dilloway-Thomas House	Very poor condition due to fire; owned by the City of Boston; will be transferred to the Afro- American History Museum.	The Massachusetts Historical Com- mission has allocated \$25,000 to the Boston Public Facilities De- partment, for restoration of the house; the Afro-American History Museum is making an effort to raise \$185,000 to fully restore the house and use it as the Museum premises; part of the ongoing John Eliot Square renewal effort sponsor- ed in part by the Roxbury Action Program.
	Dudley School	Needs some repairs; operated by the City of Boston as an elementary school	Unknown
	Cox Building	This series of structures is vacant and boarded; needs rehabilitation; under ownership by Roxbury Action Program	Will be restored with funds secured for the John Eliot Square renewal effort; R.A.P. would like to rehabi- litate the structures for housing

Table 1 - Continued

<u>Location of sites by Little City Hall District</u>	<u>Name & street address of site, or district</u>	<u>Current condition and use of site</u>	<u>Planned improvements to site or district</u>
	John Eliot Square (cont): John Eliot Hotel	Currently vacant, & needs rehabilitation; owned by Roxbury Action Program	R.A.P. would include the Hotel in its urban renewal program; would like to restore for housing
	Norfolk House, presently known as the Marcus Garvey House	Formerly a hotel, settlement house, community and multi- service center, the Hotel is not now in use.	Unknown; presumably would be restored if R.A.P. urban renewal program is funded.
	Edward Everett Hale House 12 Morley Street	Serviceable, but in need of external repairs; it is a private house	Some expectation of rehabilitation
	William Lloyd Garrison House 125 Highland Street	Moderately good condition, needs some repairs; operated as St. Monica's Nursing Home	Eligible for National Register funding; no plans known at present
	Shirley-Eustis House 31-37 Shirley Street	Structurally in fair condition, in need of cosmetic repairs; owned by the Common- wealth of Massachusetts	Shirley-Eustis Association is attempting to raise funds to restore the house, and open it as a house museum; the Massachusetts Historical Commission has allocated \$25,000 for restoration.

Table 1 - Continued

<u>Location of sites by Little City Hall District</u>	<u>Name & street address of site, or district</u>	<u>Current condition and use of site</u>	<u>Planned improvements to site or district</u>
Uphams Corner	Dorchester North Burying Ground	Needs considerable capital improvements to improve drainage and landscaping; some damage to stones, but generally in fair condition.	No plans for improvement
	Clapp Houses 199 and 195 Boston St.	Moderate to poor condition; use is unknown; owned by the Dorchester His- torical Society.	The Massachusetts Historical Commission has allocated \$5,000 to the D.H.S. for improvements for the Roger Clapp House and the William Clapp House
Jamaica Plain	Loring-Greenough House 12 South Street	Excellent condition; run as a house museum by the Tuesday Club; a caretaker is retained	Unknown
Franklin Field	James Blake House 735 Columbia Road		
South Boston	No sites in impact area		
Mission Hill	No sites in impact area		
Mattapan	No sites in impact area		
Dorchester	No sites in impact area		

Table 2

SITES AND DISTRICTS LISTED ON THE NATIONAL REGISTER OF HISTORIC PLACES BUT HAVING SUFFICIENT LOCAL INTEREST THAT ELIGIBILITY MIGHT BE WARRANTED IF PROPER EVALUATIONS WERE CONDUCTED

Location of sites, districts, by Little City Hall District	Name & street address of site; boundary lines of district	Basis on which eligibility might be based	Streets included within boundaries of any districts
1. Roxbury	Highland Park; bounded by Center Street, Marcella Street, Washington Street, and Roxbury Street	Historic center of Roxbury, contains examples of earliest settlements, as well as of succeeding periods; area contains perhaps the widest range of 19th century housing in the City, including Greek Revival, Federal, Colonial, Mansard, Victorian, High Gothic, and Italianate. Currently the Roxbury Action Program and the Afro-American Histo- rical Museum are awaiting urban renewal funds for a large-scale effort. The Massachusetts Historical Commission has allocated a percentage of a \$214,796 grant to Boston, to be spent in the Highland Park area.	Roxbury Street Putnam Place Putnam Street Dudley Place Dudley Street Guild Row John Eliot Square Highland Place Norfolk Lambert Street Millmont Street Highland Street Morley Street Highland Avenue Linwood Square Linwood Street Blanchard Lambert Avenue Kenilworth Street Bonell Terrace Bartlett Street Archer Terrace Dorr Street Rockledge Street Logan Street Juniper Cedar Square Cedar Street Cedar Park

(continued)

Table 2 - Continued

Location of sites, districts, by Little City Hall District	Name & street address of site; boundary lines of district	Basis on which eligibility might be based	Streets included within boundaries of any districts
Roxbury (continued)	Highland Park (continued)		Highland Park Fort Street Highland Park Street Beech Glen Fort Avenue Fort Avenue Chicamauga Street Hawthorne Street Ellis Street Thornton Street Marcella Mulvey Terrace Thwing Street Fulda Street Vale Street Valentine Thornton Place Thornton Terrace
	Eliot Burying Ground District (the Burying Ground is on the N.R.H.P.); boundaries are Washington Street, Eustis Street, Harrison Street and Hunneman Street	Creation of a district where adjacent streets and buildings have architectural and histo- cal integrity and relation- ship to the Burying Ground; would protect the immediate border of the Burying Ground.	Treadwell Court Lamar Place Nawn Street
	The Hill section of Roxbury Highlands; bounded by Crawford Street, Horatio Harris Park, Martin Luther King Boulevard, Washington, Columbus Avenue, Seaver St., Blue Hill Avenue, and Warren	District reflects heritage of three settlements: White Protestants (1700-1915), Jews (1900-1950), and AFro- Americans (1930 to present); range of outstanding architectural structures,	Elmore Park Brinton Street Codman Park Corliss Street Codman Place Rockdale Place Fenner (continued)

Table 2 - Continued

Location of sites, districts, by Little City Hall District	Name & street address of site; boundary lines of district	Basis on which eligibility might be based	Streets included within boundaries of any districts
Roxbury (continued)	The Hill section of Roxbury Highlands	the creation of Franklin Park in 1885 accelerated construc- tion of homes. Styles include Queen Anne, Georgian Revival, Colonial, Federal, Greek Revival, Second Empire, Shingle Style, Gothic cottages.	Dunford Cardington (spelling?) Westminster Avenue Westminster Terrace Walnut Place Waldren Road Wardman Road Ashworth Park Dennison Street Haley Street Harrishof Street Elmore Street Elmore Park Crawford Abbotsford Street Ruthven Homestead Hutchings Parkview Street Elbert Street Humboldt Pleasanton Street Brookledge Street Georgia Street Montana Street Cheney Schuyler Sonoma Maple Hartwell Segel Street Wayne Nazing

Table 2 - Continued

Location of sites, district, by Little City Hall District	Name & street address of site; boundary lines of district	Basis on which eligibility might be based	Streets included within boundaries of any districts
Roxbury (continued)	Winthrop-to- Warren Street; bounded by Winthrop, Blue Hill Avenue, Waverly and Warren Streets	Neighborhood of most intense concentration of Italianate architecture in Boston, including "Italian villa" and Gothic Revival houses.	Moreland Cleveland Street Whiting Street Montrose Street Dunreath Street Dunreath Terrace Copeland Street Aspen Street Fairland Street G. Howes Playground Copeland Place (1) Copeland Place (2) Louise Park Burton Avenue Perrin Street Murray Avenue Irwin Avenue Alaska Avenue
	Joseph Warren House 130 Warren Street	Residence of illustrious figure in Boston history, fine example of archi- tectural style of the period.	
	Amory Street Workers Houses 200 Block of Amory Street and 100 Block of Seavern Avenue	Collection of buildings representing a unique historical episode in the history of Boston.	

2. Information on the Warren House and the Amory Street Workers Houses obtained from Ms. Judy McDonough Boston Landmarks Commission. (The Commission has not acted on the application for these buildings, and the information given does not imply B.L.C. endorsement of the application, necessarily.)

Table 2 - Continued

Location of sites, district, by Little City Hall District	Name & street address of site; boundary lines of district	Basis on which eligibility might be based	Streets included within boundaries of any districts
Roxbury (continued)	Periphery of Franklin Park	Pending legislation in the Massachusetts Senate Ways and Means Committee, submitted by Christopher Iannella, would create a historic district on the periphery of Franklin Park; creation of the Park led to settlement by wealthy individuals who built out- standing homes in the area.	Unspecified
Victorian Brick Buildings, ³ - Dudley and Hampden; four public buildings include: Firehouse Church and convent School Police station		Architectural quality, cohesiveness of the buildings, and their public functions.	

Location of sites, district, by Little City Hall District	Name & street address of site; boundary lines of district	Basis on which eligibility might be based	Streets included within boundaries of any districts
Dorchester	Rosewell-Gleason House ⁴ . Corner of Clayborne and Park Streets	Unspecified	
	Melville Avenue-Wellesley ⁵ . Park area; bounded by Park Street, Penn Central Railroad tracks, Talbot Street, Washington Street, Melville Street, Orlano Street.	District encompasses some of the fines examples of Queen Anne and Victorian structures in Boston; generally the area is in excellent shape, with original gaslights still functioning; several out- standing houses -- at the corner of Waldeck-Wellesley Park, four houses on each of four corners have exceptional distinction.	Norwell Millet Spencer Whitfield Herbert Street West Tremlett Wheatland Dunlap Fosedale Aspinwall Hopestill Regina Road Alpha Road Tremlett Street Hooper Street Waldeck East Wellesley Park West Wellesley Park (continued)
	Meetinghouse Hill area; includes some specific structures, specific boundaries of the entire area are, however, unspecified; structures positively identified include:	The Square, where the First Church and Common are located is site of earliest settlement in Dorchester; in addition there are six 18th century houses in the vicinity.	Not specifically defined, but probably would include the following streets: Quincy Trent Street Hendry Street Bowdoin Street Downer Court

Table 2 - Continued

Location of sites, district, by Little City Hall District	Name & street address of site; boundary lines of district	Basis on which eligibility might be based	Streets included within boundaries of any districts
Dorchester (continued)	First Parish Church of Dorchester & Common across street from the Church, square defined by conjunction of Quincy, Adams and Bowdoin Streets; six 18th century houses & other miscellaneous houses, addresses unspecified.	Unspecified	Tovar Street Fifield Street Winter Street Navillus Terrace High Street Fruean Place Glover Place Church Street Parish Street East Street Wilkinson Park Hecla Street Lyon Street Adams Street Percival Street Fox Street Potosi Street Marie Street Mount Ida Road Elba Terrace Coleman Street
Uphams Corner	Two 18th century ⁵ . houses, Norfolk Street near Codman Square Windermere Road, located below Dudley Street, near Columbia Square, and above Cushing Street; selected houses of distinction, addresses ⁶ . unspecified.	Age, and architectural features, as well as the generally sound condition of the houses. Unspecified	

Table 2 - Continued

Location of sites, district, by Little City Hall District	Name & street address of site; boundary lines of district	Basis on which eligibility might be based	Streets included within boundaries of any districts
Upahms Corner (continued)	Sawyer Avenue, located near Windermere, below Cushing Street.	Unspecified	
	1630 House, 67 Stoughton Street, continuation of Dudley Street at Codman Square.	Age, uniqueness, represen- tation of a period from which very few examples have survived.	
	Corner of Sawyer Street and Downer Street, below Cushing Street.	Unspecified	
	Everett Street, running between Stoughton Street and Jerome Street, at Codman Square	Four connected townhouses built in imitation of Gothic Revival brick on foundations of original structures.	
Franklin Field	Periphery of Franklin Park, especially the Columbia Road area.	Pending bill before the Massachusetts Senate Ways and Means Committee, intro- duced by Christopher Iannella, to create a historic district along the periphery of Franklin Park. Columbia Road, especially, has examples of outstanding homes of late 19th century.	Unspecified

<u>Location of sites, district, by Little City Hall District</u>	<u>Name & street address of site; boundary lines of district</u>	<u>Basis on which eligibility might be based</u>	<u>Streets included within boundaries of any districts</u>
South Boston	Saint Augustine's Church ⁷ . Chapel and Cemetery 9 F Street	Unspecified	
Jamaica Plain	Monument Square ⁸ . bounded by Eliot Street, South Street, Greenough Avenue, Story Place, and along an imaginary line to South Street, Centre Street, Holbrook Street, Dane Street. This square been surveyed for its historic value and the specific houses on it have been evaluated. Each, in turn, will be described below, and the basis for its eligibility listed.	The square, and buildings surrounding it are the historic center of Jamaica Plain. One house in the area, the Loring-Greenough House, is on the N.R.H.P. The area contains plen- tiful examples of notable 19th century houses, including Gothic Revival, Italianate and Mansard houses; the neighborhood also has many Queen Anne, Shingle and Colonial Revival homes. The area has been studied by Dr. Cynthia Zaitzevsky, under contract to the Boston Redevelopment Agency, and a formal recommendation for its inclusion in the National Register has been made. Application is pending approval and action by the Boston Landmarks Commis- sion and the Massachu- setts Historical Society.	

Table 2 - Continued

Location of sites, district, by Little City Hall District	Name & street address of site; boundary lines of district	Basis on which eligibility might be based	Streets included within boundaries of any districts
Jamaica Plain (continued)	Monument Square (continued)		
	Civil War monument	Has more historic, than aesthetic value; erected in 1871; well preserved, though not maintained sufficiently.	
	Milestone marker	Just outside the enclosure of the Civil War Monument is a marker inscribed, "5 Miles to Boston Townhouse. P. Dudley, Esq. 1735."	
	First Church of Jamaica Plain and Cemetery	Directly opposite from the Loring-Greenough house; of Gothic Revival design, the church is on the site of the first meeting house in Jamaica Plain (1769); burial ground dates from 18th century; in good condition.	
	The Eliot School	Behind the Unitarian Church; built in 1832 and endowed by the original gift of John Eliot to the town in 1689; simple, but attrac- tive and well-preserved structure.	
		The total Square together forms "a significant entity which embodies a distinctive type of late 18th century and 19th century village development."	

Table 2 - Continued

Location of sites district, by Little City Hall District	Name & street address of site; boundary lines of district	Basis on which eligibility might be based	Streets included within boundaries of any districts
Jamaica Plain (continued)	Monument Square (continued)		
	Other notable buildings:		
	Two 19th century churches	Relate well to the Monument Square area, in good condition, with large amounts of landscaped greens	
	Curtis Hall	Built in 1868 as the West Roxbury Town Hall, the present building is a reconstruction, built in 1912; in good condition	
	Periphery of Franklin Park	Pending legislation intro- duced by Christopher Ianella, and in State Ways and Means Commission, would create a historic district along the peri- phery of the Park.	Unspecified
	Periphery of the length of the Olmsted Park System	The Olmsted Park System is on the N.R.H.P., and any streets, buildings and residences along its peri- meter may be found eligible by reason of maintaining the immediate environmen- tal integrity of the Park system.	Unspecified

Table 2 - Continued

Location of sites district, by Little City Hall District	Name & street address of site; boundary lines of district	Basis on which eligibility might be based	Streets included within boundaries of any districts
Jamaica Plain (continued)	Chestnut Street & Lamartine Street, located between Perkins and Green Streets, below Columbus Avenue	A number of very fine mid- 19th century houses are still surviving on these streets; mostly Greek Revival and Mansard style homes.	Unspecified; generally the boundary identified in second column.
Mission Hill	The Mission Church, also known as the Basilica of Our Lady of Perpetual Health, 1545 Tremont Street, between Roxbury Crossing and Brigham Circle.	Unspecified	

Table 2 - Continued

Location of sites district, by Little City Hall District	Name & street address of site; boundary lines of district	Basis on which eligibility might be based	Streets included within boundaries of any districts
Mattapan	Two early 18th century ¹⁰ . farmhouses located on Norfolk street; one is at Norfolk and Hosmer, the other at Norfolk and Woolson	The farmhouses date from the 1720s and 1730s, and represent some of the earliest examples of Village Rural structures; they are important to the preservation of sites representing the early history of Boston	
	1650 house located on Babson Street, near Blue Hill Avenue	One of the very few remaining 17th century buildings in Boston	
	Hazelton Street Library corner of Blue Hill Avenue and Hazelton	Public library building in good condition; precise historical and architectural information unspecified	
	Milestone marker on Blue Hill Avenue, between Goodale Road and Walk Hill Avenue, in front on factory building.	Early marker of value in maintaining information on the formation of this part of Boston.	

Footnotes

Roxbury

1. Information on historic sites and districts in Roxbury was obtained from Mr. Byron Rushing, Director of the Afro-American History Museum, and the Roxbury Historical Society, and from his staff.
2. Information the Warreh House and the Amory Street Workers Houses was obtained from Ms. Judy McDonough, of the Boston Landmarks Commission. As with the other references obtained from the Commission, representation on this table does not necessarily connote formal acceptance of the recommendation. The listings cited by the Commission reflect current applications to the Commission from local historical groups, which have not as yet been acted upon.
3. Information on the Victorian Brick Buildings was obtained from Mr. Donald Tucci, an architectural historian, and author of several books on the architecture of Dorchester, Uphams Corner, and of Boston's Churches.

Dorchester

4. Cited by the Boston Landmarks Commission; all Dorchester listings, with the exception of the Norfolk Street houses was submitted by the Commission.
5. Cited by Mr. Donald Tucci and the Boston Landmarks Commission. Mr. Craig Wall, Jr., an officer of the Dorchester Historical Society, also cited this district.
6. Cited by Mr. Tucci and Mr. Wall; all Uphams Corner listings were cited by these two men, and none was submitted by the Commission

South Boston

7. Cited by the Commission, Mr. Tucci and Mr. Wall.

Footnotes, continued

Jamaica Plain

8. Cited by Dr. Cynthia Zaitzevsky, architectural historian, who analyzed Jamaica Plain for the B.R.A. Her work, "Final Report, Architectural and Historic Surveys: Park Square, Jamaica Plain, Forest Hills Cemetery, Olmsted Park System, Pierce Square - Dorchester Lower Mills" was completed in 1970. It is available from the B.R.A. Any quotations are from the reference. The Monument Square district also was submitted by the Commission. In addition, Dr. Zaitzevsky cited the Chestnut and Lamartine Street houses.

Mission Hill

9. Cited by Mr. Donald Tucci

Mattapan

10. Cited by Mr. John Coggeshell, District Planner for the B.R.A., and Mrs. John Hannon, President of the Hyde Park Historical Society.

APPENDIX F

BOSTON LANDMARKS COMMISSION LETTER

Boston Landmarks Commission

September 25, 1975

Ms. Linda Weisburg
Resource Planning Associates
44 Brattle Street
Cambridge, Massachusetts, 02138

Dear Linda:

In response to your request for those places which have been suggested to the Advisory Boston Landmarks Commission for nomination to the National Register of Historic Places, I offer the following list. Please note that the advisory Commission has not acted on any of these requests formally; nor does this letter indicate that the Boston Landmarks Commission and its staff consider such places necessarily eligible. Please remember that the suggestions have been made by individuals and organizations. I include only those in the districts which your EIS report entails.

Jamaica Plain

- Centre St., Monument Square area and First Church (no boundary set).
- Forest Hills Cemetery

Dorchester

- Roswell Gleason House
Clayborn & Park Street
- All Saint's Church, Ashmont
- First Parish Church & Meeting House
Hill (no boundaries set)
- Ashmont Hill District (no boundaries set)
- Melville Ave.- Wellesley Park area
(no boundaries set)
- 2nd Church in Dorchester, Codman Square
- Mill Street area (no boundaries set)
- Savin Hill Rock area (no boundaries set)

- | | |
|---|---|
| <u>Dorchester (Con't)</u> | - Clarke Farm, Norfolk & Hosmer St.,
Mattapan |
| <u>Roxbury</u> | - Highland Park area (no boundary suggested)
- Joseph Warren House. |
| <u>Lower Roxbury/
Jamaica Plain</u> | - Workers' Housing Amory St.
(200 block);
Seaverns Ave. (0-100 block) |
| South Boston | - St. Augustine's Church, Chapel &
Cemetery |

Sincerely,

Judith B. McDonough

Judith B. McDonough
Preservation Planner

JBM/bap

✓

cc: Philip Zeigler, Director of Planning

**prepared for
the City of Boston
by
Resource Planning Associates, Inc.
44 Brattle Street
Cambridge, Massachusetts**